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REVIEW OF THE TRANSPORTATION PLANNING PROCESS IN THE SACRAMENTO METROPOLITAN AREA

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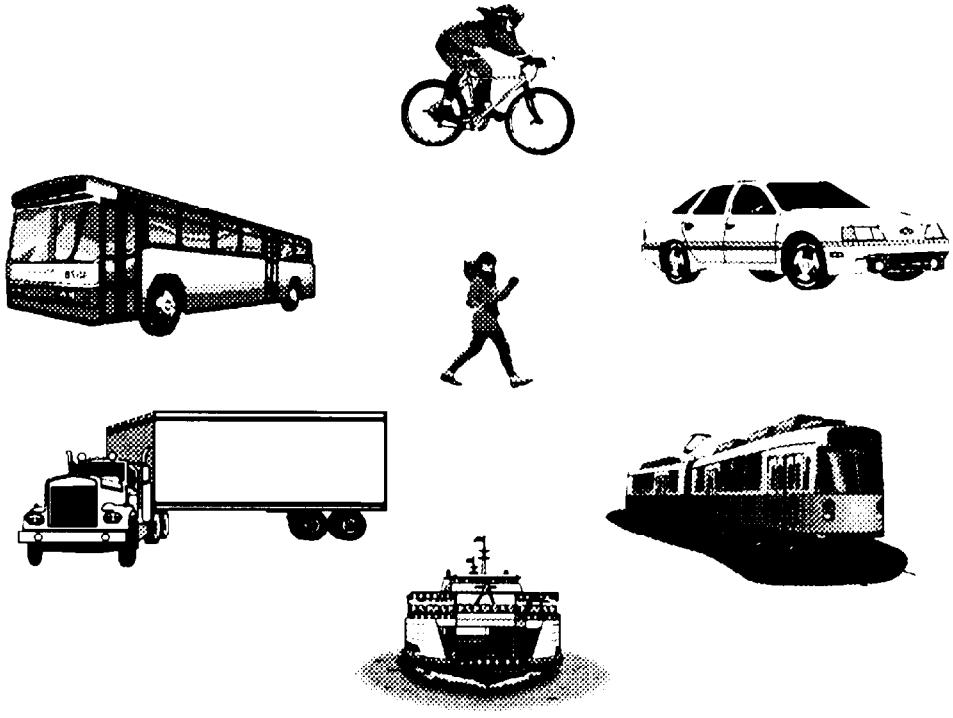

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This report is the eighth in a series produced for the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) by the Volpe National Transportation Systems Center (Volpe Center), Research and Special Programs Administration, U.S. Department of Transportation. Volpe Center staff were William Lyons, Project Manager, and Robert Brodesky (EG&G Dynatrend), Lead Analyst. Frederick Salvucci, under contract with the Center for Transportation Studies, Massachusetts Institute of Technology, was also a contributor. Overall guidance for the planning review, including production of this report, was provided by the Program Manager, Deborah Burns, of the FTA Office of Planning.

The federal review team, consisting of staff from FTA Headquarters and Region 9; FHWA Headquarters, Region 9 and the California Division; and the Volpe Center participated in the site visit in Sacramento and reviewed drafts of the report. The assistance of staff from the Sacramento Area Council of Governments (SACOG), California Department of Transportation (Caltrans), Sacramento Regional Transit District (RT), City of Sacramento, Sacramento Metropolitan Air Quality Management District (SMAQMD), and Yolo County Transit throughout the review is also gratefully acknowledged. Participating state, regional, and local staff are listed in Appendix 1.

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Glossary of Acronyms

ADA	Americans with Disabilities Act
APTA	American Public Transit Association
CAAA	Clean Air Act Amendments of 1990
Caltrans	California Department of Transportation
Cal-OSHA	California Occupational Safety and Health Administration
CARB	California Air Resources Board
CBD	Central Business District
CDF	Consolidated Roadway and Transit Development Fees
CIP	Capital Improvement Program
CMAQ	Congestion Mitigation and Air Quality Funds
CNG	Compressed Natural Gas
CTC	California Transportation Commission
DBE	Disadvantaged Business Enterprise
DEIS	Draft Environmental Impact Statement
DOF	California Department of Finance's Demographic Research Unit
EIR	Environmental Impact Review
FHWA	Federal Highway Administration, U.S. Department of Transportation
FIP	Federal Air Quality Implementation Plan
FTA	Federal Transit Administration, U.S. Department of Transportation
GIS	Geographic Information Software
HOV	High Occupancy Vehicle
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
LRT	Light Rail Transit
Metro Study	Sacramento Metropolitan Area Transportation Study
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MTC	Metropolitan Transportation Commission
NO_x	Nitrous Oxide
OWP	Overall Work Program
RT	Sacramento Regional Transit District
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
SACOG	Sacramento Area Council of Governments
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SRAPC	Sacramento Regional Area Planning Commission
STP	Surface Transportation Program
Sub-PAC	Subregional Policy Advisory Committees
3-C	Continuing, Cooperative, and Comprehensive Planning Process
TAZ	Traffic Analysis Zone
TCM	Transportation Control Measure

Glossary of Acronyms (continued)

TDA	California Transportation Development Act
TDM	Transportation Demand Management
TIP	Transportation Improvement Program
TMA	Transportation Management Area
TMP	Transit Master Plan
TSM	Transportation Systems Management
UPWP	Unified Planning Work Program
U.S. DOT	United States Department of Transportation
U.S. EPA	United States Environmental Protection Agency
UTPP	Urban Transportation Planning Process
VMT	Vehicle-Miles Travelled
Volpe Center	John A. Volpe National Transportation Systems Center, Research and Special Programs Administration, U.S. Department of Transportation

I. Summary of Findings and Suggestions

This formal and comprehensive review of the planning process in the Sacramento metropolitan area was conducted by Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) headquarters and regional staff. The federal team met with representatives of the Sacramento Area Council of Governments (SACOG), the metropolitan planning organization (MPO) for the Sacramento area, the California Department of Transportation (Caltrans), the Sacramento Regional Transit District (RT), the City of Sacramento, the Sacramento Metropolitan Air Quality Management District, and Yolo County Transit.

The federal team concluded that SACOG and other area agencies performing transportation planning conduct a competently managed and organized continuing, cooperative, and comprehensive (3-C) planning process, produce adequate planning products, and use acceptable planning tools. Efforts are being made to implement a multi-modal planning approach, and the transit operators are involved in the process.

SACOG activities have been carried out in accordance with FHWA and FTA regulations, policies, and procedures in place prior to passage of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), and the MPO is addressing requirements of the ISTEA Interim Guidance. In view of the changing requirements and policies of new law, particularly those of ISTEA and the Clean Air Act Amendments of 1990 (CAAA), the federal team developed a series of observations and suggestions to strengthen each aspect of the transportation planning process. ISTEA includes a requirement for federal certification of the planning process in any metropolitan area with a population over 200,000. This review will assist the Sacramento metropolitan area to prepare for future formal certification.

The findings of the federal team are summarized in this section. These suggestions are intended to improve a competent process and reinforce changes that have already been initiated to respond to the requirements of the new laws. Although the comments are specific to Sacramento, other large metropolitan areas are currently struggling with many of the same issues. Sections of the following report where each summary point is discussed in greater detail are noted in parentheses.

A. Organization and Management of the Sacramento Area Planning Process

1. SACOG is commended for developing a comprehensive committee structure for incorporating sub-regional transportation and congestion planning concerns into its Regional Transportation Plan (RTP) process (III.A.).

2. The Cabinet, a forum created by the City of Sacramento and the RT to discuss regional transportation issues, may constructively complement the planning process. The MPO, however, should be the definitive forum for transportation planning. The 3-C planning process, conducted by SACOG, is the federally endorsed framework for regional transportation planning. This process should provide the setting for transportation professionals and political officials to work together, with public and private input, to make regional decisions and form a regional transportation vision (III.A.).

3. The Overall Work Program (the Unified Planning Work Program [UPWP]) should include all regionally significant transportation planning and management activities in the Sacramento metropolitan area, regardless of funding source (III.B.).

B. Products of the Planning Process

1. To comply with the mandates of ISTEA, SACOG could broaden the next RTP by developing and evaluating a range of transportation and land-use scenarios. The RTP could further develop a vision for regional growth and development. An evaluation of alternative scenarios will provide SACOG with an opportunity to develop empirical information on the impact of land-use patterns and transportation actions on reducing roadway congestion and air pollution levels (IV.A.).

2. In accordance with ISTEA, SACOG must produce a fiscally constrained plan (IV.A.).

3. The Transportation Improvement Program (TIP) could include the priorities and criteria used to develop the document. This would strengthen the document, demonstrate objectivity, and establish crucial links to the long-range plan (IV.B).

4. SACOG is encouraged to include in the TIP all significant projects that are funded solely by local units of government. This would improve regional coordination of transportation projects, provide a broad audience with a single picture of regional transportation projects, and create opportunities for assessing the benefits from all programmed traffic and transit improvements (IV.B.).

C. The 3-C Transportation Planning Process

1. SACOG, RT, and Caltrans could develop a formal process to evaluate how successfully major transportation investments that have been implemented satisfy planning forecasts and the goals and objectives of the region's long-range transportation plan (V.A.).

2. In cooperation with other agencies, SACOG should develop a "plan" for data collection and analysis to ensure the optimal application of scarce resources (V.B.).

3. SACOG is commended for determining the air quality impact of non-federally funded transportation projects as part of its air quality conformity analysis (V.D.).

4. As part of the transportation plan update, the evaluation of alternative scenarios or strategies, such as land-use changes and travel demand management programs, should include the estimation of air quality impacts (V.D.).

5. Even with the court-mandated federal implementation plan (FIP) for meeting national air quality standards, air quality planning in the Sacramento region will continue to be complex and contentious. It will be to the region's advantage for the air quality districts and SACOG to prepare a comprehensive memorandum of understanding establishing

roles and responsibilities for planning and developing transportation programs/air quality programs (V.D.).

D. Tools for Transportation Planning

1. SACOG is commended for recently completing a regional transportation survey. SACOG is encouraged to work cooperatively with RT and Caltrans to conduct additional travel demand research (VI.A.).

2. Since ISTEA requires consideration of the effect of transportation decisions on land use, SACOG could develop land-use models to accomplish this (VI.A.).

E. Ongoing Transit Planning

1. RT is commended for its innovative and environmentally progressive approach, combining the use of compressed natural gas buses, expansion of the light rail transit (LRT) system, and the introduction of electric trolleys (VII.A.).

2. RT could reevaluate its long-term service capacity plans and reconcile them with projected ridership increases. While RT planned a five-fold increase in transit capacity, estimates of future transit use suggest that it will be a challenge to increase transit mode share 150%, from below 2% to 5%. Long-range objectives for transit capacity and ridership increases should be clearly stated and consistent in long-range plans of both RT and SACOG (VII.A.).

3. RT is encouraged to further emphasize the multi-modal approach to transit in its Transit Master Plan (TMP). Transportation systems and demand management strategies could be combined with transit development as integrated components of the future transportation system. Together, the TMP and the RTP could assess projected impacts of these integrated strategies and indicate effects on vehicle-miles travelled (VMT), air quality, and congestion. This expansion could add an important dimension to RT's strategic planning, including proposed LRT, bus, and trolley expansions (VII.A.).

4. RT could improve its ability to evaluate proposed service through strengthened data collection and analysis. Evaluation of new service might include comparisons of expected performance to that of similar routes, and estimating the number of connections and employment centers proposed projects would serve (VII.B.).

F. ISTEA Planning

1. SACOG is commended for reviewing how adequately its planning process reflects the fifteen factors identified in ISTEA. SACOG is encouraged to incorporate the factors not currently addressed into its planning process, including: preservation and efficient use of existing transportation facilities; the impact of transportation policy on land use and development; efficient freight movement; and social impacts.

2. SACOG has successfully created subregional policy advisory committees (Sub-PACs) as a means to enhance citizen participation in the transportation and air quality planning process.

3. RT does not appear to have any formal citizens' involvement program. RT could consider forming advisory committees which would increase opportunities for citizens to influence policy development, consistent with the emphasis in ISTEA.

II. Introduction

A. Background

On February 9-11, 1993, a team of representatives from FHWA Headquarters, Division, and Regional offices; FTA Headquarters and Regional offices; and the U.S. Department of Transportation's Volpe National Transportation Systems Center (Volpe Center) met with representatives of the Sacramento Area Council of Governments (SACOG), which is the MPO, the California Department of Transportation (Caltrans), the Sacramento Regional Transit District (RT), the Sacramento Metropolitan Air Quality Management District (SMAQMD), and other agencies.

Prior to the site visit, the team reviewed extensive documentation on the planning process in the area. The site visit consisted of structured meetings with staff from the regional, local, and state agencies responsible for transportation and air quality planning, and the major public transit providers. Participants in the review are listed in Appendix 1. The agenda for the meetings is presented in Appendix 2. The team also conducted follow-up discussions after the meetings.

Under the regulations in place prior to passage of ISTEA, the State of California and the MPO had to self-certify that the urban transportation planning process (UTPP) conforms to joint regulations set forth in 23 CFR 450, which encompass transit, highway, and air quality planning. The federal regulations were designed to ensure that urban areas apply a 3-C transportation planning process to develop plans and programs that address identified transportation needs in the area, and that are consistent with the overall planned development of the metropolitan area.

Self-certification is intended to grant responsibility for transportation planning to states and MPOs, but does not relieve FHWA and FTA of oversight responsibilities and the obligation to review and evaluate the planning process. One means of satisfying these responsibilities is through periodic independent reviews.

The federal team evaluated whether transportation planning activities of SACOG and other metropolitan area agencies are being carried out in accordance with FHWA and FTA regulations, policies, and procedures in place prior to passage of ISTEA, and whether the MPO is addressing requirements of the Interim Guidance on ISTEA metropolitan planning requirements, issued on April 6, 1992. In view of the changing requirements and policies of new law, particularly those of the Clean Air Act Amendments of 1990 (CAAA) and ISTEA, the review was undertaken to develop observations and suggestions to strengthen major aspects of the transportation planning process.

B. Scope of the Planning Review

A purpose of this review is to allow FHWA and FTA to determine how successfully the UTPP addresses broadly defined regional transportation needs, and whether the planning process meets joint planning regulations and the Interim Guidance on ISTEA metropolitan planning requirements. Another purpose of the review is to assess the ability of the planning process to address broader responsibilities described under the guidelines implementing ISTEA and the CAAA. ISTEA includes a requirement for federal certification of the planning process in any metropolitan area with a population over 200,000. This review will assist the Sacramento metropolitan area to prepare for future formal certification.

The team reviewed support documentation that included the Regional Transportation Plan (RTP), the region's long range transportation plan; the Transportation Improvement Program (TIP); RT's Master Plan; the Overall Work Program (OWP); and other technical materials related to the UTPP. (Documents are listed in Appendix 3.)

The review also focused on the transportation and air quality planning activities of SACOG, Caltrans, RT, and the SMAQMD.

C. Objectives of the Planning Review

In conducting the planning review, the objectives of FHWA and FTA are to determine if:

- Planning activities of the MPO and SACOG are conducted in accordance with FHWA and FTA UTPP regulations, policies, and procedures in place prior to ISTEA, and the Interim Guidance on ISTEA metropolitan planning requirements

- Regional transportation planning is a 3-C process that results in the development and support of transportation improvements for the Sacramento metropolitan area

- The transportation planning process involves representation and input on transportation needs from all levels of government, transit operators, the public, and other interest groups

- The OWP (or the Unified Planning Work Program [UPWP]) adequately reflects all aspects of the UTPP and all transportation planning in the area

- The transportation planning products, including the TIP and long-range transportation plan, reflect the identified transportation needs, priorities, and funding resources

- Products of the transportation planning process are multi-modal in perspective, complete, based on current information, and interrelated; and

- Requirements and objectives of ISTEA, the CAAA, and the Americans with Disabilities Act (ADA) are incorporated into the planning process and supported by transportation development activities

D. Local Transportation Issues

To understand the regional context in which transportation planning is performed in the Sacramento metropolitan area, the review team identified the following major transportation issues through discussions with SACOG and other regional agencies.

Issue 1: **Population Growth.** According to the RTP, the region's population will increase by 45% between 1989 and 2010. This rate of growth will be difficult for the Sacramento region to absorb without major investments in infrastructure, and further degradation to the ambient air quality.

Issue 2: **Peak Hour Congestion.** During the 1980's, regional VMT grew at a faster rate than the region's population or employment. From 1984 to 1989, the increases in population and employment were approximately 15% and 22%, respectively, and the increase in VMT was about 26%. VMT are expected to grow to more than twice 1984 levels by 2010 and will create a substantial deterioration in levels of service on major Sacramento routes.

Issue 3: **Air Quality.** The Sacramento region has been designated a "serious" nonattainment area for ozone under the CAAA. It must also respond to the requirements of the California Clean Air Act. As a consequence, SACOG, along with the region's five air pollution control districts, must incorporate air quality attainment objectives into its planning and project evaluation, adopt quantitative procedures for evaluating air quality impacts, and improve air quality results.

Issue 4: **Federal Air Quality Implementation Plan.** Because the courts have judged the State Implementation Plan (SIP) for air quality inadequate, the U.S. Environmental Protection Agency (EPA) must impose a Federal Implementation Plan (FIP) on the Sacramento region which would establish mandatory programs to achieve federal air quality standards. Sacramento air quality planners believe that drastic FIP measures could affect the area's economic well-being.

Issue 5: **MPO Membership and Boundaries.** The region's federal air quality non-attainment area includes two counties -- El Dorado and Placer -- which are not members of SACOG. These counties have individual regional transportation planning programs, and are reluctant to join an urban transportation planning process with a dominant center city.

Issue 6: **Financing of Transportation Projects.** Implementation of capital projects in the RTP requires $2.1 billion in additional revenues through the year 2010. Although additional funding sources have been identified, no consensus has been reached on which revenue sources to pursue in the political arena.

Issue 7: **Transit Mode Share.** In response to air quality and congestion concerns, the region has adopted a goal that calls for an increase in the transit mode share from less than 2% to 5%. The region's analysis of different transportation options indicates that this will be a very difficult objective to achieve.

Issue 8: **Regional Transportation Planning.** The City of Sacramento and RT have created a forum, known as the Cabinet, for discussing regional transportation issues. Although the Cabinet's mission is not yet fully defined, it could become an ad hoc body for establishing transportation policy and project priorities outside of the 3-C process led by SACOG.

Issue 9: **Coordination of Transportation, Land-Use, and Congestion Management Planning.** SACOG does not have land-use or urban growth powers which it could use to influence future development patterns. The region's counties separately prepare land-use and congestion management plans.

Issue 10: **Responding to Federal and State Mandates for Transportation and Air Quality Planning.** The MPO must annually respond to different state and federal mandates for regional transportation and air quality planning. Although the mandates may be similar, the MPO and other local agencies are frequently engaged in parallel, time consuming efforts to coordinate work and meet separate requirements for programming projects, mitigating congestion, and developing air quality plans.

III. Organization and Management of the Planning Process

A. Metropolitan Planning Organization

SACOG is a voluntary association of city and county governments. It serves four counties and fifteen cities composing a 3,343-square-mile area with a population of 1,413,325. The organization provides planning and technical support to its members, and acts as a forum for transportation, air quality, and land-use issues. It was created in January 1981 as the successor to the Sacramento Regional Area Planning Commission (SRAPC). SRAPC became the MPO (the federal designation) for the Sacramento metropolitan area in 1967, and the state's authorized Regional Transportation Planning Agency (RTPA) for Sacramento, Sutter, Yolo, and Yuba counties in 1972.

All certifications and designations of SRAPC were transferred to SACOG, including the agency's federal and state designations for managing the regional transportation planning process. In 1981, the Governor expanded SACOG's MPO designation to include the Yuba City urbanized area. SACOG's MPO designation was expanded again in 1991 to include the Davis urbanized area.

The MPO and RTPA designations require similar planning processes. These designations require SACOG to:

- Provide a public forum for discussing region-wide transportation planning, congestion management, and air quality issues
- Establish regional priorities that guide multi-modal planning and programming activities conducted by RT, Caltrans, and city and county governments
- Adopt a regional transportation plan, transportation improvement program, and overall work program; and
- Ensure the incorporation of local air quality and congestion management activities into the region's plans and programs

These requirements produce a certain level of synergy; however, they also require the SACOG staff to conduct parallel efforts in the planning areas that do not always coincide. Since the passage of ISTEA, SACOG staff has become increasingly concerned about how much time and coordination the combined state and federal requirements will entail.

SACOG's organizational structure and responsibilities are outlined in a 1992 Organization and Management Prospectus. Policy and management direction is provided by a board of directors. The board, which uses a weighted voting formula, has ten to thirteen members, depending upon whether or not Sacramento and Sacramento County exercise their options to appoint more than one member. Even without appointing additional representatives, the city and the county have two and three votes respectively. Membership also includes supervisors from Sutter, Yolo, and Yuba counties and five city councilors or mayors who represent the fourteen SACOG member cities. City representatives are jointly appointed by five sets of cities (Davis, West Sacramento, Winters, and Woodland; Folsom,

Galt, and Isleton; Live Oak and Yuba City; Marysville and Wheatland; and Lincoln, Rocklin, and Roseville). The Caltrans District Director is granted an ex-officio board position.

The Directors participate on six executive committees. The Transportation and Air Quality Committee, which is composed of four board directors and the Caltrans District Director, is supported by several policy and technical advisory committees that provide guidance on: (1) air quality; (2) the RTP; (3) transit productivity improvements; (4) specialized transportation services for the elderly and disabled; (5) TIP-related policy and project selection issues; and (6) regional transportation modeling. A separate committee known as the Regional Roundtable includes representatives from the business community in the planning process. Separate task forces have also been formed to address ISTEA concerns, including pedestrians and bikeways, and financial issues.

Guidance for the RTP is provided by three Sub-PACs. Membership on each of the Sub-PACs is geographically based and includes elected officials, citizens, and representatives from organizations with local mandates for highway, transit, air quality, and congestion management. The Sub-PACs were created by SACOG after careful consideration of how to incorporate organizations with comparable functions but somewhat different priorities into the regional planning process. SACOG staff found this structure to be productive but very time consuming. The same structure with some modification will be used for the next RTP update.

The city of Sacramento and RT have created a second forum, known as the Cabinet, for discussing transportation issues. Although the Cabinet's mission is not yet fully defined and will probably focus on the central city, it could become an ad hoc body for establishing transportation policy and project priorities outside of the 3-C process led by SACOG.

Observations and Suggestions

1) SACOG is commended **for incorporating sub-regional transportation, and congestion planning interests into its RTP process.** This is accomplished through a comprehensive committee structure and including the business community in the Regional Roundtable. In addition, the Sub-PAC committee structure indicates a commitment to rationalizing state and federal requirements for congestion management, air quality planning, and multi-modal planning.

2) The 1992 Organization and Management Prospectus is a necessary document given the complexity of planning activities mandated by state and federal legislation. The document, however, **does not fully describe SACOG's organizational responsibilities and how the MPO formulates regional policy**. The Prospectus could describe the agency's history, its official designations for regional transportation planning, the relationship of the board to policy and technical committees, the committee structure, and how SACOG interacts with other planning agencies. The prospectus will enhance public understanding of complex agency roles and responsibilities, and will encourage improved public participation as envisioned by ISTEA. SACOG is encouraged to keep its prospectus current as roles and responsibilities shift to meet evolving federal and state requirements.

3) The Cabinet may be a constructive complement to the planning process, but **the MPO should be the definitive forum for transportation planning**. The 3-C planning process, which is conducted by SACOG, is the federally endorsed framework for regional transportation planning. This process is intended to provide the setting for transportation professionals and political officials to cooperate, with substantive public and private input, on region-wide decision-making and the formation of a regional transportation vision.

B. Overall Work Program (Unified Planning Work Program)

In accordance with joint FHWA/FTA planning regulations, the SACOG Board of Directors annually prepares an Overall Work Program (which constitutes the federally required Unified Planning Work Program). The document describes the multi-modal, federally funded transportation planning activities that are to be conducted for the Sacramento metropolitan area. The document is intended to provide other agencies and the public with an overview of the major transportation issues facing the region, and the tasks that will be undertaken to support regional planning.

The OWP includes the following types of projects:

- Maintenance and enhancement of the regional long-range plan, including the regional transportation models
- Development of the TIP
- Completion of projects that focus on short-range transit service planning, monitoring, and evaluation
- Completion of the air quality development plan and conformity analysis
- Maintenance of region-wide inventories that include demographic, socioeconomic, and transportation system and travel data
- Completion of specific transportation service and facilities plans
- Completion of studies that address specific topics such as goods movement and transportation pricing strategies
- Administration of the MPO process; and
- Coordination of interagency activities and public involvement

SACOG groups responsible for each functional area annually prepare project descriptions by reviewing the previous year's activities and determining unfinished work. The recommendations of plans and studies that have been adopted by the board are also reviewed to identify any new projects. This results in initial work scopes which include: (1) an objective statement; (2) a brief discussion of the purpose and approach; (3) a list of tasks weighted by estimated time; (4) a list of expected products and completion dates; and (5) preliminary cost estimates for completing the work.

In January, SACOG's transportation management team meets with SACOG's Executive and Deputy Executive Directors to discuss the project scopes and assess what revenues will be available to undertake the identified projects. This discussion usually results in establishing priorities for projects to be included in the OWP, and negotiation regarding the project scopes. The annual regional transportation planning process is also key to establishing the priorities for OWP project selection. For example, during the last update of the RTP, transportation financing was identified as a major priority, resulting in addition of a transportation financing study in the next OWP.

SACOG has actively identified many needs of the region's cities and counties, and has presented programs to them for local funding. To better respond to concerns regarding regional air quality, SACOG sought local support for a comprehensive meteorological and emissions inventory program. Most of the cost of the program was paid for with approximately $2.4 million in local funds -- the remainder was paid for with federal funds.

The MPO understands that the OWP is intended to reflect the needs and priorities of the region. Even though SACOG's regional transportation planning committee structure establishes a mechanism for identifying issues and possible projects, the OWP priority setting and project selection process seems divorced from strong local involvement. Based on information provided by SACOG, the process appears to be driven primarily by SACOG's in-house management and staff.

Project scopes prepared by SACOG are comprehensive, but the OWP document does not indicate the importance of the OWP as a management tool. The overall document resembles a compilation of work programs. A lengthy prospectus section is included, but it does not fully describe: (1) the document's purpose; (2) how the OWP relates to the regional transportation planning process and development of the TIP; and (3) how project selection priorities are established and applied.

To improve public understanding of the range of regional planning, the OWP describes a number of projects that are not federally funded. These include Caltrans corridor studies and technical assistance to local jurisdictions for modeling. However, SACOG does not consistently include all regionally significant state-, locally or privately funded projects in its OWP. Generally, these projects are included at the request of the sponsor.

The OWP includes SACOG's airport and land-use activities. As the state-designated Airport Land Use Commission for the region, SACOG is responsible for developing a land-use plan for the areas surrounding public use airports. Federal regulation does not require airport related activities to be included in the OWP. As a consequence, many metropolitan areas omit airport system planning activities from the 3-C process. This step by SACOG signifies concern for integrated, multi-modal planning and maintenance of the region's quality of life.

Observation and Suggestions

The OWP appears to be comprehensive and rigorously developed. The following suggestions are intended to improve the process and documentation.

1) **Participation in the priority setting and project selection processes for the OWP could be broadened** through the establishment of a task force of representatives from implementing

agencies and local jurisdictions that would adopt project selection criteria, and then select projects submitted by member organizations or SACOG staff.

2) The OWP document could **establish for readers the importance of the OWP as a strategic management tool** for implementing the regional transportation goals. The prospectus section might be revised to describe more clearly:

   - The importance of the work program to the metropolitan planning process
   - The consistency of the program with the long-range plan
   - How work elements are interrelated and collectively lead to progress in the metropolitan planning process
   - The relationship of work elements to planning activities undertaken the previous year
   - How programs and projects are selected; and
   - The anticipated results of the overall planning effort and individual tasks

3) The OWP should **include all regionally significant transportation planning and management activities** in the Sacramento metropolitan area, regardless of funding source. The joint planning regulations require that all transportation planning activities be included in the OWP whether or not they are federally funded. By including all significant activities that are funded by state and local sources, SACOG would provide a more complete picture of regional planning.

4) SACOG is commended **for including the airport land-use activities it conducts as the region's Airport Land Use Commission in the 3-C planning process**. This signifies a strong regional commitment to multi-modal planning and integrating transportation services and the environment, as encouraged in ISTEA.

C. Self-Certification

Self-certification of the UTPP is done annually with the adoption of the TIP. At that time, SACOG adopts a resolution certifying that the planning process is in accordance with federal procedures. Certification was last completed in November 1992.

IV. Products of the Process

A. Transportation Plan

The long-range transportation plan for the Sacramento metropolitan area, known as the RTP, is updated every two years in accordance with California law. The version reviewed was adopted by SACOG's Board of Directors in November 1992. The RTP consists of a summary document and a technical appendix which includes a series of working papers that were prepared by SACOG staff.

The development of the plan is based on a rational planning process that incorporates:

- Existing and future population and employment estimates
- Modal travel forecasts
- Land-use planning
- Environmental considerations
- Regional mobility issues
- Goals, objectives, and policies for guiding the region's transportation investments
- An evaluation of regional mobility options based on transportation performance measures; and
- A financial assessment of the mobility option

SACOG assesses existing and future conditions by tracking land-use patterns and developing forecasts of population, employment, and travel demand. This assessment provides a basis for the agency to determine where system deficiencies will exist, how serious these deficiencies will be, and what strategic actions could be included in the RTP to maintain reasonable levels of mobility. The current plan seeks to develop responses to the legislative requirements of ISTEA, the CAAA, California's "Transportation Blueprint," and the California Clean Air Act.

The RTP presents five different regional mobility options to guide the region through the year 2010. A building block approach was used to develop these options. Each basic option was presented and evaluated. Additional options were then created by adding one or more supplementary actions, and demonstrating the ramifications of incremental changes. The plan considered combinations of the following five elements: (1) expansion of public transit service; (2) development of high occupancy vehicle (HOV) lanes on freeways; (3) roadway improvements (based on 2010 congestion projections); (4) changes in land-use patterns and policies; and (5) transportation congestion management strategies. After evaluation of the different options using transportation performance criteria, SACOG staff concluded that the regional mobility option that included each of the different elements listed above performed the best. The preferred option includes:

- A commitment to a land-use policy in Sacramento County that promotes "transit-friendly" development, and increased walking and biking

- Construction of all of the light rail extensions in the RT Systems Planning Study, except for the Greenback/Sunrise and West Sacramento/Davis extensions, along with feeder bus networks

- Construction of all the HOV lanes that were recommended in SACOG's HOV System Planning Study

- Implementation of a parking policy that doubles current parking rates and imposes a $1 fee where parking is currently free; and

- Expansion or improvement of roadways with volume-to-capacity ratios of 0.91 or higher

As part of the evaluation of the different mobility options, five supplemental tests were conducted. These constitute an initial effort at sensitivity analysis.

The RTP was not financially constrained (as currently required under ISTEA). The preferred regional mobility option is estimated to cost $2.1 billion more than anticipated revenues from current sources for the planning period. Different options for financing the shortfall are explored in the RTP, and regional planners are trying to identify an acceptable new revenue source. At the time of the site visit for this review, FHWA was awaiting further information regarding the reasonableness of new funding sources.

As stated above, SACOG uses a building block approach to developing its regional mobility options, allowing planners to test the ramifications of incremental actions. This approach, however, limits consideration of a range of distinguishable future alternatives. Expansion of the LRT system, which is costly, is a major component of each of the RTP's regional mobility scenarios. Consideration of other possible alternative mobility strategies appears to be limited.

Due to a number of regional problems (a high rate of population growth, poor air quality, and an uncertain revenue stream), SACOG now has an opportunity to work toward the development of a regional growth and development vision that might guide transportation planning. The RTP recognizes that regional growth and development patterns affect transportation behavior. It contends that the current land-use trend -- the promotion of low density, single family developments -- is inefficient and will be very costly to sustain. Low density development contributes to increased single occupancy vehicle use, more congestion, and poor air quality, and requires substantial public investment in supporting infrastructure. The plan encourages higher density and mixed-use development adjacent to existing and planned transportation corridors, discusses land-use and transportation strategies that have been implemented elsewhere in the U.S. and Europe, and includes a number of potential objectives along with the policy actions necessary to pursue them.

Despite progress toward developing a long-term regional vision, evident in the RTP, no official policy for growth and development management has been adopted. SACOG is without land-use or urban growth powers, which could influence the region's future development patterns. The region's counties separately prepare land-use and congestion management plans. SACOG is organized exclusively to perform MPO functions and not as a council of governments. Although it has substantial in-house modeling expertise, the MPO is also required by state regulations to use state-generated population and employment forecasts, which impedes the assessment and utilization of a range of possible growth estimates and the testing of different planning scenarios.

SACOG recognizes that its update to the RTP will be a complex task. It will focus on how to balance: (1) legislative mandates for congestion management at the local and regional levels; (2) the need to meet short- and long-term clean air standards by developing politically acceptable strategies; and (3) balancing the need to identify the most cost effective solution with strong local support for extensive LRT improvements. According to SACOG staff, the updated RTP would improve the current version by presenting a chosen regional transportation vision, identifying issues that must be addressed, and describing alternatives considered while explaining why the adopted policy is appropriate.

Observations and Suggestions

SACOG uses a rational planning process to develop the mobility options that constitute the long-range RTP. The MPO is also commended for conducting sensitivity analysis to test the effects of regional changes on adopted plan strategies and for beginning to pursue the development of a regional vision. The following suggestions are intended to improve the RTP development process and product and to create a better planning tool.

1) In accordance with ISTEA, SACOG **must produce a fiscally constrained plan**. To ensure the development of strategies which balance cost effectiveness against scarce revenues, SACOG could determine the best use of its available investment dollars, and develop strategies that do not exceed investment dollars. The selection of transportation improvements would be guided by regional goals and would lead to the development of a list of high-priority improvements in the approved plan that could be funded based on reasonably available funding sources. This could include new funding sources, where strategies for obtaining these sources are identified. A supplementary list of needed activities, outlining costs and benefits, that would require additional funding sources could also be identified. This would provide the public and the elected officials with a better idea of realistic options and the consequences of foregoing actions that might be implemented given additional revenue sources.

2) Consistent with ISTEA, which calls for metropolitan areas to adopt efficient, cost effective transportation solutions, the Sacramento region could **develop and evaluate a broad range of transportation scenarios** presented as alternative "visions" for the area. The current approach focuses on a single vision and evaluates strategies as incremental changes. Strategies that might be combined in scenarios could include:

    - Expansion of the bus system
    - Development of a system of HOV lanes supported by improved cross-town transit service and park-and-ride lots
    - Adoption of a range of transportation congestion management strategies; and
    - Promotion of new activity centers to increase employment opportunities outside of the downtown

3) SACOG could **further develop a vision for regional growth and development** to be incorporated in the next RTP. The RTP reviewed makes a good start by exploring the links between development patterns and travel behavior. Evaluation of alternative regional visions will provide SACOG with an opportunity to develop empirical information on the impact of

land-use patterns and transportation actions on reducing roadway congestion and air pollution levels. A broad regional vision would also encourage political support by regional decision-makers and the public, and be a useful guide to the development of effective transportation programs.

B. Transportation Improvement Program

SACOG, as the MPO and RTPA, must prepare transportation improvement programs to secure federal and state funding. To fulfill federal and state requirements, SACOG annually prepares a document known as the Regional Transportation Improvement Program (RTIP), which becomes the basis for its request to the U.S. DOT and California Transportation Commission (CTC) for project funding. The RTIP constitutes the federally required TIP. The RTIP reviewed was adopted in November 1992, and covers fiscal years 1992-93 through 1998-99. The program, which lists $1.9 billion worth of capital and operating improvements, is financially constrained -- SACOG anticipates funding of approximately $1.1 billion from federal sources and $800 million from state and local sources.

The development of the RTIP is a complex process. It requires inputs from MPO member cities and counties, congestion management agencies (CMAs -- which were created by the state to address local congestion issues), transit operators, and Caltrans. The RTP provides the basis for many of the projects that are included in the RTIP. SACOG mandates that all projects requiring federal funds be specified directly in the RTP or be in response to one of the RTP's programs, policies or actions. Similarly, transportation-related planning and programming documents prepared by the state, local transit operators, and local jurisdictions are the sources for many of the RTIP projects.

The RTIP development process depends on the interrelationship of the region's CMAs and the MPO. SACOG exercises a considerable degree of leadership in achieving a balance between the local priorities that are established by the CMAs and the regional priorities that are included in the RTP. The RTP provides a broad regional strategy, which is used by the CMAs to provide context for the development of their management programs and seven-year capital improvement programs (CIPs). The CIPs, which are required by state legislation, provide a basis for identifying projects submitted to SACOG for inclusion in the RTIP.

To ensure the integration of local and regional priorities in the RTIP, SACOG uses its three RTP s subregional policy advisory committees, known as the Metro, Yolo, and Yuba-Sutter Sub-PACs. The Sub-PACs include members from the CMAs' boards and technical advisory committees. Through these Sub-PACs, SACOG reviews the CMAs' congestion management programs and CIPs to ensure that the efforts of each of the entities are consistent and enhance one another. This process also provides SACOG with an opportunity to raise regional issues with the counties and to ensure that the CMAs' management plans and CIPs are consistent with the RTP and the regional transportation modeling efforts.

SACOG and the CMAs have recently developed an innovative selection process for identifying consecutive financially constrained five-year "bundles of projects" to implement over a twenty-year time period. As described by staff, each bundle will consist of priority projects for resolving congestion problems that would be plugged into the RTP, CIP, and the RTIP. The selection process

consists of: (1) identifying candidate projects based on readiness and funding eligibility; (2) screening projects and ranking them by program category; (3) determining funding availability for the first five-year period by program category; and (4) selecting a financially constrained bundle. Projects that cannot be funded during the first five years would be deferred to the next five-year cycle. The process would be repeated for the remaining five-year increments. The fourth five-year bundle (years 16-20) would produce a final "drop-out bundle" that would constitute the region's unconstrained project list (those projects it is unable to fund based on twenty-year funding projections).

Despite the intent to implement this process, the specific criteria that will be used to select the projects for inclusion in the bundles remain unclear in the RTIP document. Revenue availability and project readiness are only two possible criteria for developing a list of priority projects, and it appears currently that the process could be driven by separate sets of local criteria; regional consistency would then be pursued through discussion and negotiation at the MPO level. If SACOG and the CMAs do not apply a specific range of objective, quantitative criteria, they might weaken their accountability and compel the public to assume that the best decisions have been made, thereby limiting public participation. This omission could obscure how multi-modal considerations or tradeoffs are factored into project selection.

Some RTIP projects are also selected directly by Caltrans and the CTC. Caltrans submits its own projects, and CTC selections are based on projects that SACOG has nominated after it has insured their consistency with the RTP. SACOG nominates projects that are eligible for Surface Transportation Program (STP) and CMAQ funding. Before the Caltrans and CTC projects are adopted, they are reviewed for consistency with the RTP by the SACOG staff assembling the RTIP. The RTIP is then reviewed to ensure conformity with air quality guidelines.

Projects administered by Caltrans are tracked through the state TIP data base, and Caltrans produces "Status of Contracts" and "Status of Projects" reports. SACOG has established a tracking and reporting procedure for STP- and CMAQ-funded projects, and tracks projects that are one hundred percent locally funded through preparation of biennial RTP updates and the transportation modeling effort.

Observations and Suggestions

1) SACOG is commended for **competently managing a complex planning and programming process** that results in the development of transportation improvement programs that satisfy state and federal requirements. SACOG has demonstrated an ability to balance local and regional priorities by establishing Sub-PACs, which correspond to specific geographical portions of the metropolitan area.

2) The TIP could **include clear descriptions of the priorities and criteria used to develop the document**. This would strengthen the document, demonstrate objectivity, and establish crucial links to the long-range plan. The public and advocacy groups will increasingly demand this type of specificity to determine if the TIP's projects comply with the requirements of ISTEA, the CAAA, and state legislation. By doing this, SACOG would more firmly establish the TIP as a strategic short-term planning document for implementing region-wide projects, rather than a document that appears to be a compilation of different agencies' improvement programs.

3) SACOG and the CMAs could further **develop criteria and specific measures to select projects for five-year planning bundles**. Revenue availability and project readiness are important criteria and will certainly ensure that the region's transportation planning process moves closer to meeting the federal demands for financially realistic plans and programs. However, these two criteria may not be sufficient to evaluate the impact of the projects in achieving different regional and local goals. Without identifying a range of quantifiable criteria, the process will appear to be driven by separate sets of local "criteria." The process will then depend on discussion and negotiation at the MPO level. Quantitative criteria, designed to assess the ability of projects to contribute to satisfaction of regional goals, would ensure that the process for selecting projects in the RTIP is not dominated by political considerations.

4) Caltrans and SACOG are **commended for tracking the progress of regional transportation projects**. However, because these activities are conducted separately by the two agencies, they do not permit a regional assessment of the progress of projects. Technical and financial milestones prior to construction could also be monitored and reported on a regular basis and from one TIP to the next.

5) SACOG is encouraged to **include in the TIP all significant projects that are funded solely by local units of government**. The intent is to improve regional coordination of transportation projects, and create opportunities for assessing the benefits from all programmed traffic and transit improvements. This will enhance SACOG's ability to link regional and local transportation and land-use planning and will be essential for analyzing the conformity of the TIP with the SIP.

V. Elements of the 3-C Transportation Planning Process and Related Activities

A. Evaluation of the Impact of Major Investments

The Sacramento region does not have formal guidelines on when to evaluate major highway and transit investments that have been implemented, and on the methodologies to be applied. These evaluations are not formally recognized as the responsibility of specific working groups; no guidance exists on which agency should take the lead for conducting these types of studies. RT tracks ridership on the LRT system, allowing forecasted and actual ridership levels to be compared. Daily ridership was forecasted to be 20,500 in 1988, a year after the system opened. Actual ridership in 1988 was slightly below the forecast; but the system is currently carrying approximately 24,000 daily passengers. Roads are monitored by Caltrans. For the most part, the MPO is not involved with monitoring roadway conditions or assessing region-wide transit service.

Observations and Suggestions

1) SACOG, RT, and Caltrans could **develop formal processes to evaluate completed major transportation investments.** Investments could be evaluated to determine the extent to which each meets planning forecasts and the objectives of the long-range transportation plan. Evaluations could consider elements of a sound 3-C planning process, contrasting actual impacts to forecasted impacts on: costs; ridership (in the case of transit); automobile usage (vehicle trips or miles travelled); and other relevant factors, including land use and air quality.

   These analyses would test the assumptions underlying project approval related to land use, demographics, and pricing policies, and would assess the validity of analytical methods. Investment assessments will be increasingly important, given the scarcity of national and regional financial resources, and will reflect the emphasis on efficiency in ISTEA.

2) An **evaluation procedure for major potential capital investments** could also be implemented, and might:

   - Determine the costs and benefits of individual projects and alternative actions
   - Examine project financing, including an analysis of operating costs and debt financing
   - Examine the impact of significant projects on the regional economy
   - Review projects to determine equity, efficiency, and the appropriateness of a range of different funding sources; and
   - Monitor the investment in terms of providing for regional growth and stimulating desired land-use patterns

B. Monitoring, Surveillance, and Reporting

Numerous data collection and preparation activities are underway in the region. These activities, managed by various agencies, support reappraisal of the long-range plan, corridor studies, assessment of transit services, and air quality analyses. The different agencies work cooperatively to update travel behavior inventories and traffic counts. However, the region has no plan that

identifies the specific roles and responsibilities of different transportation agencies for data collection. Data maintained at a discrete level include population and population density; total employment and employers; and completed building permits and square footage.

SACOG's Research Section collects and maintains substantial information at the Traffic Analysis Zone (TAZ) level, which it uses to produce baseline and future year population and employment estimates. Housing inventory and population estimates have been prepared annually by SACOG since 1973 and are currently available for 1984, 1989, and 2010. As part of this annual effort, SACOG collects residential building permit completion information, geocodes the information by TAZ, and adds the data to its housing inventory. Population growth estimates are prepared for each TAZ based on the housing inventory, as well as vacancy and household size data (by dwelling type) from recent censuses and jurisdictional control totals prepared by the Demographic Research Unit of California's Department of Finance. The Research Section does not use geographic information software (GIS).

SACOG would prefer to update its employment estimates annually; however, due to limited staffing and funding, employment estimates are updated every 18-24 months. SACOG has employment estimates available for 1984 and 2010. As part of this effort, the Research Section maintains a large data base with over 30,000 employment locations. It also collects building square footage data from county assessor files and conducts extensive field surveys.

There was interest in using a more current baseline estimate of employment during the revalidation of the regional transportation model, conducted by consultants to RT. The study team decided to develop 1989 estimates; however, they decided that simple interpolation between SACOG's 1984 and 2010 employment estimates would not produce reliable results. This problem was attributed to recent growth trends in the metropolitan area. The team then decided to produce the best possible estimates by combining information from a number of different data sources. The procedure involved: (1) developing control totals for the region and for municipalities using SACOG's 1984 estimates and California's Employment Development Department county growth rates for 1984-1989; (2) refining the 1989 totals for community plan areas based on a review of building permits, occupancy levels, and employment densities; and (3) determining growth rates of zones in the community plan areas. The baseline is not yet reliably up-to-date.

The continuous tracking and updating of population and employment trends is critical to keeping the 3-C planning process current. The demographic estimates are essential inputs to the region's travel demand model, which is used as a planning tool by SACOG and RT. The regional travel demand estimates are also used for congestion management and air quality planning purposes.

To re-estimate its travel demand model, SACOG conducted a region-wide survey of weekday travel habits and patterns in the spring and fall of 1991. The survey was completed by a market research consulting firm that was also under contract to Caltrans to conduct a statewide travel survey. This enabled SACOG to use the same questionnaire and to combine its survey results with those produced for the state. The combined sample for the Sacramento region was approximately 4,400 households or 10,000 people, and 45,000 individual trips.

The combined travel surveys resulted in only 400 transit trips. Since this was inadequate for regional modeling efforts, the results were combined with data collected by RT in 1989 and 1992 in two on-

board surveys. Due to differences in survey methodologies and questionnaires, combining the transit data produced less than satisfactory results. SACOG has requested that RT fund a more extensive survey to remedy this problem. It is recommending a one-day household survey that would focus on collecting demographic, work trip, auto ownership, and attitudinal information. In addition, RT is considering conducting a larger on-board survey which would allow more extensive route level analyses and determine the demand for a grid bus service pattern.

The first phase of surveying produced a clear report on travel patterns and behavior in the Sacramento region. SACOG has compiled data on: (1) daily trips; (2) modes used; (3) trips by purpose; (4) trip times; (5) auto ownership and occupancy; and (6) travel by time-of-day.

Additional research is planned to add information on: (1) regional travel patterns; (2) factors that influence travel behavior; (3) how access to light rail affects travel behavior; (4) whether or not the type of neighborhood affects travel behavior, and (5) the extent to which people run errands going to and from work.

Recently, an inter-agency modeling team with participants from SACOG, RT, the city of Sacramento, and the county of Sacramento has been established. One of its responsibilities is to collect system condition and operating data. This data base is maintained by SACOG, but no documents are produced. In addition to this, the region conducts a screenline counting program every two years which includes a Central Business District (CBD) cordon count.

Observations and Suggestions

SACOG's Research Section is commended for undertaking extensive data collection activities. The information collected and compiled is critical to the planning activities of RT, CMAs, city and county agencies, and air quality districts.

1) SACOG might **enhance its MPO functions by developing a GIS capability** in its Research Section. This capability might improve SACOG's ability to manage the extensive data that are collected, and to conduct analyses combining socioeconomic and demographic, travel and congestion, and air quality pollutant information. By providing a dependable regional perspective, GIS could also strengthen SACOG's ability to serve the metropolitan area's transit operators, city and county agencies, CMAs, and air quality districts.

2) The region's transportation agencies are commended for **forming an inter-agency modeling team** that has the responsibility for collecting and maintaining system condition and operating data, and utilizing one set of population and employment estimates for conducting system planning. SACOG is also commended for initiating a region-wide travel survey by soliciting financial support from local counties and municipalities.

3) SACOG should continue **developing a more up-to-date baseline (e.g., 1990) estimate of region-wide employment** along with disaggregated estimates at the TAZ level. Since the Sacramento region grew rapidly during the 1980s, numbers that best represent growth trends and concentrations of employees are necessary to conduct system planning studies that produce reliable results.

4) In cooperation with other agencies, SACOG could develop **a plan for data collection** and analysis to ensure the optimal application of scarce resources. Given the large number of ongoing data collection activities and the likely demands for additional research to meet ISTEA, the CAAA, and California requirements, the region should consider different ways to achieve greater efficiencies.

C. Ongoing and Corridor Multi-Modal Planning Approach

By monitoring demographic, employment, and land-use changes in the region, SACOG can analyze trends and, using its regional travel model, better forecast how travel patterns will change during the planning period. In preparing the 1992 RTP, the regional travel demand model was used to assess multi-modal transportation strategies. The alternative strategies or options included LRT and HOV networks, express bus service, commuter rail, intercity rail, and a number of system management and demand management programs.

The region's transportation agencies routinely undertake regional system plans or corridor studies to support long-range planning. The Sacramento Metropolitan Area Transportation Study (Metro Study), which was approved by the SACOG Board of Directors in December 1989, appears to have been a pivotal project. Its original objective was to identify a list of transportation projects to meet 2010 travel demand; however, it successfully linked air quality, land use, and land development issues to regional mobility. Its recommendations also generated several follow-up studies that have focused on multi-modal corridor solutions, an evaluation of LRT extensions, and the development of an HOV system plan.

The Metro Study's recommendations included:

- Development of an RTP that minimizes air pollution emissions
- Aggressive implementation of transportation control measures (TCMs)
- Expedited development of an HOV Systems Planning Study
- General plan amendments to encourage higher densities near transit and mixed land uses
- Further study of several multi-modal corridors; and
- Advancement of numerous transit and road projects

Studies that have been initiated or completed include:

- The Southeast Area Transportation Study, which is conducted by Caltrans, and is evaluating the need for a multi-modal corridor around the eastern and southern portions of the metropolitan area. The study, to be completed by the end of 1994, focuses on how to maximize the efficiency of existing facilities. New freeway construction has been given a low priority. Even though seventeen initial alternatives have been identified, only two focus on new roadway construction. Other alternatives include Transportation Systems Management (TSM) options, HOV lanes on existing highways, arterial street improvements, regulatory and policy strategies, user fees, land-use strategies, and advanced technology;

- The I-80/Route 102 Multi-Modal Transportation Study, conducted by Caltrans, which focused on how to maximize the utility of existing transit and highway facilities in the region's northeast corridor;

- The Sacramento Systems Planning Study, which was completed by RT in 1991, evaluated several light rail extensions, including those proposed by the Metro Study. The South Line was identified as the best candidate for discretionary FTA funding;

- The South Sacramento Alternative Analysis/Draft Environmental Impact Statement (DEIS), which is currently being conducted by RT, and is evaluating several TSM, HOV, and light rail alternatives. Two light rail alignments are also being analyzed;

- The High Occupancy Vehicle System Planning Study, which was completed by SACOG in 1990. Since then, the study's recommendations have been incorporated into the RTP as part of the different transportation options;

- The Watt Avenue/Route 50 Study, which was conducted by the county of Sacramento in 1992, and evaluated several options for widening the bridge over the American River including various HOV treatments.

Another major study, conducted jointly by SACOG, Caltrans, and the San Francisco Bay Area's Metropolitan Transportation Commission (MTC), was the SACOG-MTC Strategic Transportation Planning Study. The study developed four different alternatives to improve the I-80 corridor, which connects San Francisco and Sacramento. It addressed specific issues such as air quality, goods movement, and congestion. In addition, it was one of five case studies conducted around the country to define the new transportation agenda embodied in ISTEA. The study concluded that federal law should allow funds to be used in a flexible manner to deal with local and regional problems.

Following this, SACOG, MTC, and Caltrans jointly sponsored the Hannigan Study to examine inter-city passenger rail service between Sacramento and the San Francisco Bay area. In line with the study's recommendations, Amtrak has initiated three daily round trip commuter trains between Sacramento and San Jose. The plan calls for ten round trips per day by the year 2000.

A corridor study was conducted to determine which of two parallel highways (Highways 70 and 99) that connect Marysville and Yuba City to Sacramento should be upgraded to a freeway. The study concluded that Highway 70, the principal route connecting Marysville with Sacramento, should be upgraded. To improve access to Yuba City (which is served primarily by Highway 99), and to secure Yuba City's support for the Highway 70 upgrade, a new river crossing over the Feather River was recommended.

SACOG has started the Suburban Mobility Initiative to better understand suburban mobility problems and to develop strategies for alleviating suburban congestion. A number of working papers have been produced. The first describes the problem of suburban congestion and explores its basic causes; the second describes the suburban mobility problem in the Sacramento region; and a third will review strategies used successfully to ease suburban congestion in other metropolitan areas. The project

includes in-depth travel studies of two suburban activity centers (Arden Fair/Point West and White Rock/Sunrise) with employer-based, land-use, and bicycle/pedestrian recommendations. In addition, SACOG sponsored a one-day symposium to discuss suburban mobility issues with public and private sector decision-makers. The symposium brought together more than 75 elected officials, planners, business people, and policy advocates.

The Transit Master Plan issued in April 1992 has a multi-modal perspective and calls for the formulation of a regional growth and development policy that is consistent with the RTP's land-use and development goals. To enhance transit use, the Transit Master Plan recommends:

- The adoption of a regional urban service boundary, beyond which, transit (and other urban services) would not be provided
- Development of employment and residential centers outside of the downtown
- Further development of Suburban Activity Centers, such as shopping centers or office parks, to incorporate transit-friendly designs and land uses; and
- Development of incentives to encourage more intensive land development, including filling in vacant parcels in the central portion of the metropolitan area

Observations and Suggestions

1) Regional planning agencies are commended for **conducting a number of different corridor studies that examine a range of alternative solutions** that focus on development of a particular mode or a combination of multi-modal improvements and TCMs. By considering multi-modal alternatives, the region demonstrates a commitment to identifying cost effective solutions that will reduce congestion and air emissions.

D. Consideration of Air Quality

The Sacramento metropolitan area is designated as a serious nonattainment area for ozone and a moderate nonattainment area for carbon monoxide. In addition, EPA is currently in the rulemaking stage of designating Sacramento County, which includes most of the metropolitan area, as a small particulate matter (PM_{10}) nonattainment area. All areas that have been classified serious for ozone must meet the CAAA attainment standards by November 1999. For the Sacramento region, this equates to a 15% annual rate for ozone reduction. According to the region's air quality planners, this 15% annual rate of progress will be difficult to achieve.

Achieving region-wide consensus on air quality planning has been difficult and, at times, very contentious. Concern was expressed during the review that many of the elected officials have not accepted the seriousness of the problem and the need to support a range of actions. Consensus on air quality strategies is difficult because the region has five different air quality districts, each with state mandates to develop plans and air quality mitigation actions. Under the CAAA, SACOG is responsible for ensuring that the metropolitan area's transportation plan and investment program conform to the SIP.

SACOG is currently working very closely with each of the air districts within the metropolitan area to delineate roles and responsibilities for meeting the requirements of the CAAA. A Memorandum of Understanding (MOU) between SACOG and SMAQMD has been prepared. It is anticipated that the MOU will be signed in the near future and that similar MOUs will be signed with the other air quality districts in the Sacramento ozone nonattainment area.

Due to many factors (for example, institutional arrangements, concerns regarding maintaining the region's economic well-being, and diverse political agendas), achieving the CAAA attainment standards will be difficult. Area air quality planning has recently entered a critical stage. It is now subject to an EPA-administered FIP. The U.S. Supreme Court decided in February 1993 not to review two Appeals Court decisions requiring EPA to prepare FIPs for the Sacramento and Los Angeles metropolitan areas. The Sacramento region is concerned that its EPA-prepared FIP will include measures for cutting emissions from mobile and stationary sources that will impose a heavy economic burden. At the time of the Supreme Court decision, the EPA stated that no measures have been ruled out; however, it wants to avoid any actions, such as mandatory no-drive days, that would cause economic disruption. For the FIP to work, the EPA will have to forge working relationships with the region's five air quality districts and SACOG to implement, impose, or monitor the measures.

According to the California Air Resources Board (CARB), mobile sources accounted for approximately 66% of all emissions in 1987. This, however, is not a complete picture of mobile emissions sources. Automobiles and light duty trucks accounted for 49% of the reactive organic gas emissions and 46% of the nitrous oxides (NO_x) emissions in 1987. These percentages are projected to decline to around 22% and 29% by the year 2000 and to 9% and 18% by the year 2010. The current emission estimates are based on the most recent estimates of population, employment, travel, and congestion as derived from the 1990 Census and transportation modeling efforts.

The 1990 federal emissions inventory is the responsibility of CARB. The CAAA required CARB to prepare a 1990 base year inventory to be submitted as part of the SIP by November 15, 1993. The CARB is currently working very closely with each air district within the area to prepare the 1990 emissions inventory.

As required by the CAAA, a conformity analysis of the RTP, the long range transportation plan, and the 1992/93 TIP was performed by SACOG. The analysis was done in accordance with the Interim Conformity Guidance (June 7, 1991) issued by the U.S. EPA and DOT. SACOG's current modeling practice includes all transportation projects, regardless of funding source, in both the build and no-build scenarios for the conformity analysis. The last conformity finding, made on November 19, 1992, assumed implementation of all TCMs in the RTP. SACOG has concluded that identified TCMs will not contribute more than a 15% peak period trip reduction.

Observations and Suggestions

1) SACOG is commended for **determining the air quality impact of non-federally funded transportation projects** as part of its air quality conformity analysis.

2) When estimating emission impacts during the transportation plan update, **evaluation of scenarios** that test different strategies, such as land-use changes and telecommuting or other reductions in home work trips, could be included. This would provide a more comprehensive picture of the air quality effects of potential transportation strategies.

3) Even with the FIP, air quality planning in the Sacramento region will continue to be complex and contentious. It will be to the region's advantage if the air quality districts and SACOG **prepare comprehensive memoranda of understanding** to establish how each organization will contribute to the development, implementation, and enforcement of transportation/air quality plans, including the FIP.

E. Outreach Efforts

Citizen Participation

SACOG involves citizens in the 3-C planning process through public meetings, workshops, and hearings.

For the purpose of updating the RTP, SACOG prepared a community input plan. To keep the public informed, SACOG uses newsletters, press releases, and workshops. Newsletters announcing the date of public meetings were mailed to over 900 individuals and organizations. Nine different workshops were held at various sub-regional locations. Six of the workshops focused on defining what regional mobility problems the plan should address. Three workshops were then held to define which mobility options should be evaluated in the plan. To ensure attendance at these workshops, SACOG placed advertisements in the major local print media.

State law requires that the public be given an opportunity to comment at every meeting of the board of directors on any matter within the board's purview. In addition, the same law requires that the board only act on matters on an agenda posted 72 hours in advance of its meeting unless an emergency situation exists. Formal public hearings were held before the board of directors on the draft RTP and its environmental impact review (EIR) and on the final RTP and EIR. Each TIP adoption is preceded by an advertised public hearing.

Minority Participation

Minority representation on the board of directors, the policy advisory committees, and the technical advisory groups does not reflect the minority population of the metropolitan area. Board members and policy advisory committee members are often elected officials selected by the mayors and boards of supervisors of the region's cities and counties. SACOG has encouraged the region's jurisdictions to consider minority representation for the public member seats on its policy advisory committees. SACOG's Social Service Transportation Advisory Committees are composed exclusively of

representatives of minority, low income, disabled, and social service organizations. The backgrounds or profiles of many of these individuals match the organizations they represent.

The RTP newsletter mailing list includes many ethnic and neighborhood organizations and newspapers. It also includes groups such as the League of Women Voters and Women's Transportation Seminar. A Spanish translation of the RTP newsletter was distributed to all interested organizations. During SACOG's recent travel survey of 4,400 households, translators were available in Spanish and several Asian languages to ensure that the survey was representative of the total population.

Private Sector

SACOG has private sector representatives on two of its committees: the Regional Roundtable and the Transit Productivity Advisory Committee. Membership on these committees has provided the private sector with the opportunity to review and comment on the development of the long-range transportation plan.

The Suburban Mobility Symposium, which was held in January 1992, represented a major effort to involve the private sector in the plan development process. Executives from regional companies were brought together with elected and government officials to identify suburban mobility problems and to define solutions they would be willing to help implement.

Observations and Suggestions

1) SACOG works hard at communicating with the public and providing an open planning process; however, **efforts could be expanded to incorporate citizen participation in the formation of transportation planning alternatives** and the consideration of important decisions. This more active approach is encouraged by ISTEA. Outreach efforts could also be expanded to include large employers; employer associations; labor organizations; financial, real estate, and development associations; and environmental organizations.

   The continued development of a consensus among competing groups on regional strategies early in the planning process may be particularly useful in preparing to deal with the CAAA and its compliance requirements. This consensus-building would be particularly helpful for implementing TCMs and avoiding any more litigation based on the CAAA.

2) The SACOG Board of Directors could consider changes to the **make-up of its membership and that of its advisory committees so that these bodies more closely reflect the metropolitan area's minority population.**

VI. Tools, Skills, and Data Base for Transportation Planning

A. Travel Demand Forecasting

SACOG is responsible for the development and maintenance of the regional travel demand model. Over the last two years, SACOG has greatly improved its in-house travel demand expertise by hiring new staff. Along with the recently created inter-agency modeling task force, SACOG staff has begun addressing modeling issues and identifying possible model enhancements. The region's transportation agencies recognize that many of these enhancements will have to be made to address the CAAA and ISTEA requirements. In addition, local jurisdictions have expressed interest in using the travel demand model for conducting sub-area, corridor, and site-specific analyses.

The region's travel demand model represents the state-of-the-practice. A four-step travel demand model is used, with transit and auto modes represented. It uses land-use/socioeconomic data and transit/highway network data to estimate facility-specific transit and highway volumes. The model was last modified and revalidated in 1990 as part of RT's Transit Systems Planning Study. Due to recent major data collection efforts in the region and federal and state requirements, individual steps in the model will be re-estimated. The OWP calls for the development of an auto ownership model, and the re-estimation of the trip distribution, trip generation, mode choice, and trip assignment sub-models.

The model operates on a microcomputer (80486 processor) using the MINUTP software. Spreadsheet and data base programs are used to prepare the land-use and socio-economic data. RT's update to the model has 812 TAZs and 30 external stations for representing travel into, out of, and through the region. SACOG will be expanding the modeled area to include all portions of the federally designated ozone non-attainment area.

SACOG's Research Section prepares land-use, population, housing, and employment forecasts that are based on local jurisdictions' general plans and input from local planning departments. Land-use allocation models are not used in the demographic forecasting process. Thus, the extent to which access-sensitivity in the land-use allocation process is considered is not clear. The land-use and socioeconomic data base includes: (1) number of single-family-dwelling units; (2) number of multiple-family-dwelling units; (3) number of acres in analysis zones; (4) amount of retail employment; (5) amount of non-retail employment; (6) total employment; (7) population; and (8) median household income.

As discussed earlier, a travel survey of about 4,000 households was conducted in 1991. Even though the survey data are currently being used to recalibrate the travel demand model, the combined travel surveys resulted in only 400 transit trips. More extensive surveying is needed to better understand why travellers in the region are choosing transit for different trip purposes. Also, more disaggregate information is needed to understand what modal attributes and public policies will motivate auto users to switch to a range of transit options.

The trip production model is based upon cross-classification lookup tables of trip rates stratified by household type (single-family or multi-family) and auto ownership. These are parameters that directly affect the level of "motorized" tripmaking. To improve this modeling effort, SACOG plans to adopt

a new auto ownership model that uses household and employment data, and a pedestrian factors index. The pedestrian environment factors index is a composite ranking of four different factors: topography, continuity of streets, availability of sidewalks, and the ease of crossing streets. Another improvement that is planned includes the estimation of trip ends for a new trip purpose (i.e., school trips). The trip production rates were originally estimated by statistical analysis of data from a 1968 travel survey and then updated using a 1981 household survey that was conducted in the San Francisco Bay Area. Production estimates do not give in-depth attention to income, accessibility (for example, transit or HOV facilities), or the growth of non-home-based and other irregular travel.

Another planned improvement is the inclusion of A.M., P.M., and off-peak time-of-day analyses. The current version of the model conducts A.M. and off-peak analyses. The different time of day enhancement will be incorporated into the trip distribution, mode choice, and trip assignment steps. Also, the peak periods will be extended.

SACOG uses a traditional gravity model form of distribution. A feedback loop will be added between the trip assignment and trip distribution steps. This improvement will enable the region to conduct analyses to determine how congested travel time and associated travel costs affect mode choice. This will facilitate analyses that are necessary to satisfy the CAAA requirements and support locally initiated congestion management activities.

SACOG employs a nested logit approach to estimate the modal shares of work trips. Mode shares are estimated for drive-alone, autos with two occupants, autos with three occupants, walk-to-transit, and drive-to-transit. This will be modified to enable the region to estimate mode shares for pedestrians and bicyclists and to better assess how changes in public policy could result in increased walking or bicycling (pedestrian mode share is estimated to be 10%). Due to its physical layout and good weather, Sacramento already has a high level of pedestrians and bicyclists. By having this estimation capability, the region improves its ability to respond to transportation and air quality legislative requirements at the federal and state levels, including those in the FIP.

Parking cost is a key input to the mode choice step since it frequently exceeds vehicle operating costs and as a result, influences decisions to drive or use transit to downtown locations. This variable will enable the region to assess the impact of some types of pricing strategies on travel behavior. Furthermore, the introduction of pricing strategies, such as increasing parking costs, could be needed to achieve the "significant" modal shifts which might be necessary to produce air quality improvements. The parking costs are developed based on current zonal weighted average rates and increases in future zonal employment density. Auto operating cost per mile is another input to the mode choice model, and is used to determine the zone-to-zone auto operating cost as well as the cost associated with drive-to-transit access. The inclusion of this variable allows the region to conduct additional sensitivity analyses on how increases in the cost of gasoline would affect mode choice. These analyses are particularly important because of possible gasoline tax increases at the federal, state, and local levels.

The only record of the current modeling process is the technical memorandum titled, Travel Model Development, which was completed for RT's Systems Planning Study. It is not completely clear whether or not the upgrades recommended in the study have been adopted by SACOG.

The demand projections for the 1992 RTP adopted improvement strategy indicated that between 1992 and 2010 the Sacramento region could expect the following system changes:

Performance Criteria	Percent Increase
Person-hours of delay	193
Lane-miles of level of service (LOS F)	234
Linked transit trips	90
Transit mode share	26
Transit mode share for CBD commuters	74
Vehicle-miles of travel	67
Average auto occupancy	1
Vehicle-trips	50
Person-trips	51

Sub-area population and employment forecasts are important inputs to the regional travel demand model. In support of the modeling effort, SACOG prepares small-area demographic projections for whatever horizon or "target" year will be incorporated in the RTP. State of California guidelines require SACOG's region-wide population projections to be consistent with the aggregate county projections prepared by the California Department of Finance's Demographic Research Unit (DOF). SACOG attempts to constrain its projections to DOF's county-level estimates; however, DOF's long-range projections are out-of-date and inconsistent with 1990 census results. Until DOF releases revised projections, SACOG has developed and applied its own control totals, which are consistent with a trend extension of DOF's interim short-range projections and the U.S. Census results.

SACOG's most difficult task is allocating county-level projections to TAZs in a manner consistent with local land-use plans. In doing this, SACOG has relied heavily on the input of local planners to ensure that its projections are consistent with adopted policies or imminent policy changes.

Observation and Suggestions

1) SACOG and the region's transportation agencies are commended **for forming an inter-agency modeling task force** to identify issues and model enhancements. This has resulted in a commitment to a number of upgrades to improve travel estimation by different modes and trip purposes, and representing the impact of land use and urban design factors. The upgrades will also enable the region to improve the analyses that are conducted to establish public policy and respond to the requirements of the CAAA and ISTEA.

2) As part of the demand model recalibration effort, SACOG might consider **incorporation of new variables** for income, which provide a strong indication of the likelihood of travel between zones, and accessibility of modes such as transit and HOV. Figures on accessibility and income might help explain the context and pattern of non-home-based travel, which has been identified as "fast-growing" in studies elsewhere in the United States.

3) SACOG is commended for recently **completing a regional transportation survey**. SACOG, with the cooperation of RT and Caltrans, is encouraged to conduct additional research to address the following issues: (1) why residents in the region choose transit; (2) what attributes or factors influence auto users to switch to transit; and (3) how preferences for transit development are influenced by cost, time, and environmental tradeoffs.

4) SACOG could **develop land-use models capable of forecasting the impacts of transportation on land use**.

5) SACOG is encouraged to **document the modeling process that is currently in use** and is the analytical basis for project planning and development. This documentation could be important if the metropolitan area faces litigation under the CAAA and ISTEA.

B. Costing Methodologies

SACOG has formed a Regional Financial Task Force comprising metropolitan area public works, Caltrans, and transit operator staff. The group has helped to define operating and maintenance cost categories. They have then estimated costs for current fiscal years and supplied expected annual growth factors for use in the planning process.

The cost estimating methods are based on the most recent local data and estimates. SACOG staff validate the locally supplied cost estimates by comparing costs on a per-mile basis with estimates from other similar jurisdictions. Where significant differences occur, SACOG works with the local staff to explain the differences or to uncover any errors or misinterpretations.

In developing the RTP, SACOG used the operating and maintenance costs for the expanded LRT system developed by RT. The methodologies used by RT to develop these cost estimates were not independently validated by SACOG. Capital costs for constructing new highway facilities are determined by Caltrans or by the public works departments of different local jurisdictions.

Observations and Suggestions

1) SACOG is **commended for forming the Regional Task Force to define operating and maintenance cost categories, estimating costs for current fiscal years, and monitoring locally supplied costs**.

VII. Ongoing Transit Planning

A. Organizational Issues

RT is responsible for the metro area's transit planning and operation. In the late 1960's, the regional planning agency, the Sacramento Regional Area Planning Commission, recommended that a regional transit district be formed. Enabling legislation was introduced and signed into law in November 1971. RT began bus service on April 1, 1973.

Since RT's inception 20 years ago, its role as the regional transit provider has evolved. RT now operates an LRT line located in the central portion of its service area. The line, which became operational in 1987, is the centerpiece for a regional LRT system. In recent years, RT has further defined its LRT development plan. It includes 5- and 10-year staged expansions for extending the starter line and constructing new lines to major activity centers. RT is currently interested in upgrading portions of the starter line from single to double track. By eliminating this design constraint, the system's best headway would drop from 15 to 7.5 minutes. RT anticipates that these capital improvements would increase ridership without any significant increases in operating costs.

Other agency priorities include:

- Expansion of the bus fleet from 202 to over 500. RT describes the fleet as undersized and unable to serve existing demand. A comparison of RT's bus operations with those in similar size cities indicates that RT's fleet size is at the low end -- Portland, Oregon, with a population of 1.2 million, has 623 buses; San Antonio, with 1.3 million people, has 644 buses; and Buffalo, with 1.2 million, has 395 buses;

- Improvement of local and arterial bus service;

- Reduction of the average fleet age from 14.5 years to 8 years over the next few months. According to RT, it operates one of the oldest bus fleets in the country, with some over 31 years old;

- Introduction of compressed natural gas (CNG) buses. RT has 95 CNG buses on order to replace its diesel buses; and

- Introduction of 60 electric trolleys. Electric trolley bus service will be implemented in cooperation with the Sacramento Metropolitan Utility District. RT has identified a number of demonstration corridors in the central business district and along arterials leading to and from the downtown.

RT is aggressively pursuing the development of public transit. Its approach, which includes using CNG vehicles, expanding LRT service, and introducing electric trolley service, is innovative and environmentally sound. To a great extent, the success of this transit development plan hinges on population density and land development patterns. RT suggests that the region's investment in its transit development plan and a commitment to policies that will encourage more dense land development will stop or slow the growth of auto-dependent developments and shape a "new"

emerging city. However, since the region's population density is low, and distributed over a large geographical area, the economic justification for its transit development program, which is capital intensive, must be carefully considered.

RT will be expanding its service area to include many of the region's new urban and suburban areas. In 1991, RT sought and won state legislative support to expand the service area. The service area will at first include the new growth areas in Sacramento County, such as Laguna and Antelope. Eventually, it will expand to coincide with the proposed Sacramento County Urban Policy Area boundary used in the 1991 draft General Plan.

In April 1992, RT issued a draft TMP, which is a twenty-year service development strategy that includes: (1) service area expansion; (2) LRT development in eight corridors; (3) transit fleet expansion to 500 motor buses, 200 light rail vehicles, and 60 electric trolley buses; (4) major capital investments in new bus maintenance operations centers; and (5) an additional light rail vehicle facility and an expanded administrative facility. The various transit modes are intended to serve different trip purposes and land uses. For example, motor coaches would combine with circulator shuttles to serve local and express movements; electric trolley coaches would operate on dense local urban trunk lines; and light rail would offer local and express trunk service.

The TMP includes five-, ten-, and twenty-year planning periods for service expansion, providing agency direction for the short- and long-term. It also encourages land uses oriented toward pedestrian and transit accessibility, and provides the basis for acquisition of right-of-way for facility development. RT expects the TMP to be instrumental in securing cooperation from local jurisdictions, including additional funding to implement the plan.

Prior to the TMP, RT conducted the Systems Planning Study (SPS) from 1989 to 1991. This study resulted in the RT Board of Directors adopting a long-range rail development plan in 1991, and establishing a priority list of fixed guideway corridors.

The program of transit capital and service expansion described in the TMP is ambitious. These improvements constitute a five-fold increase in transit service capacity by the year 2011, with commensurate growth in ridership (TMP 5-1), and are large contributors to the RTP funding shortfall. These estimates of capacity growth can be contrasted to the region's objective of increasing the transit mode split from less than 2% (TMP Exhibit O) to 5% (TMP 3-6), or a 150% increase, which can be described as an optimistic goal.

According to RT, the five-fold increase in capacity is not based exclusively on physical expansion of the system. It also includes double-tracking portions of the starter line, increasing frequency enough to attract new patrons. RT describes this service level as a necessary ingredient for success. Without it, it would be difficult to attract suburban commuters and achieve the 5% transit mode split objective.

In the OWP for 1994-95, SACOG and RT have included a task to reconsider the TMP based on current financial constraints. The RT Board of Directors has also appointed a blue ribbon committee to advise RT on the type of transit system needed to serve the community, the organizational structure needed, and the preferred means of generating the necessary funding. RT and SACOG are jointly staffing the blue ribbon committee; a report is expected in early 1995.

RT's transit development approach, while innovative, could be modified to further emphasize the multi-modal emphasis of ISTEA. The TMP recognizes the need to coordinate its transit system expansion with other transportation initiatives, such as commuter and intercity rail, and a network of HOV lanes. The TMP, however, does not present a comprehensive view of how a network of HOV lanes or other TSM and Transportation Demand Management (TDM) strategies might enhance transit development and, in combination, produce cost effective alternatives for the region.

It appears that RT and SACOG are moving toward a more cooperative working relationship and, according to staff, have resolved differences. In the past, RT has been dissatisfied with the results of SACOG's regional travel demand model, which appeared unfavorable to transit. Through the formation of an inter-agency modeling task force, RT and SACOG have begun to resolve these differences. In addition to this, RT and the city of Sacramento have recently included SACOG in a group known as the Cabinet, which was formed to consider transportation policy and capital investments.

In Yolo County, which is outside of RT's service area, transit services are provided by the Yolo County Transit Authority. The Authority has been in operation since 1982, and provides services through private contractors. Expansion of service from Yolo County to Davis and the Sacramento Municipal Airport is currently under consideration. In addition to its transit function, the Authority is the county's CMA. With the support of a technical committee, the authority provides guidance, develops plans, and recommends projects to mitigate congestion and improve air quality.

Observations and Suggestions

1) RT and SACOG are commended for **moving toward a cooperative working relationship** in assessing transit improvements and strategies. Strong links exist between SACOG's RTP and RT's TMP, and even greater coordination and clarification of the roles of the two plans are needed to define and evaluate the region's transit development approach. The formation of the inter-agency modeling task force to address demand issues and identify enhancements to the region's travel demand model is evidence of the growing cooperation between the two agencies.

2) RT is commended **for its innovative and environmentally progressive transit development approach**. Its approach combines the use of CNG buses, expansion of the LRT system, and the introduction of electric trolleys.

3) RT might **reevaluate its long-term service capacity plans and make any necessary reconciliations with estimates of future transit use**. While RT is planning for a five-fold increase in transit capacity, estimates of future transit use suggest that the goal of increasing transit mode share 150%, from below 2% to 5%, will be a challenge. Goals for capacity and ridership increases should be clear and consistent in long-range plans of RT and SACOG.

4) RT is **encouraged to further emphasize the multi-modal approach to transit** in its TMP. Transportation systems and demand management strategies could be combined with transit development as integrated components of the future transportation system. Together, the TMP

and the RTP could assess the projected impacts of these integrated strategies and indicate effects on VMT, air quality, and congestion. This expansion could add an important dimension to RT's strategic planning, including proposed LRT, bus, and trolley expansions.

B. Performance of Existing Service and Development of New Service

RT conducts evaluations of performance by using data it collects via route checks, boarding counts, and passenger surveys. Data are collected on a monthly or annual basis, and RT generates quarterly data reports, which it uses to evaluate individual route performance. In conducting these route evaluations, RT attempts to answer the following types of questions:

- Is ridership going up or down on each route?
- Is ridership either very low or over capacity on particular trips or times of day?
- What segments of the routes or particular facilities are strong trip generators?

The LRT system carries approximately 23,000 passengers per day, and in the peak has a load factor (of seating capacity) of 130%.

RT evaluates routes based primarily on passengers per hour, with a standard of 35 passengers per vehicle-hour. The transit agency monitors and evaluates passenger-miles traveled on a system-wide basis; however, it does not do so on a route-level basis. RT conducts few assessments of where to add service, because it does not have the equipment (i.e., additional buses) to provide more service than it currently offers. To satisfy peak period demand, RT must operate 150 of its 200 buses.

California has a legislative requirement for the state's RTPAs to conduct triennial performance audits. The audits are based on twelve compliance requirements that were identified in the California Transportation Development Act (TDA). These compliance requirements include operating cost per passenger, operating cost per vehicle-service-hour, passengers per vehicle-service-hour, passengers per vehicle-service-mile, vehicle-service-hours per employee, and fare box recovery ratio.

The TDA requires transit systems in metropolitan areas to maintain a fare box recovery ratio of 20%, which RT has exceeded in each audit. In fiscal years 1989, 1990, and 1991, the fare box recovery ratios were 26.2%, 26.7%, and 25.4%. RT estimates that the current fare box recovery ratio is approximately 27%. RT's fare-to-local-support ratio of 42.8% exceeds the state requirement of 40%.

RT expects ridership to follow service additions, because the current system is under-funded and significant transit demand is not being served. The agency's data collection for assessing demand appears to be limited to boarding calculations and what is necessary to satisfy the federal Section 15 data reporting requirements. This data limitation may handicap RT's competition for ISTEA flexible funds.

Observations and Suggestions

1) RT could **expand its data collection to strengthen evaluation** of proposed service. The agency could also analyze passenger-miles, which reflect distance travelled, in addition to total passengers, which is boardings rather than completed trips. Knowing the subsidy or cost per passenger-mile would improve consistency in comparisons of service with different average trip lengths (crosstown and express routes), and different modes (light rail, fixed-route bus, and demand response). Passenger-miles might also be a useful measure of transportation benefits in competitions for flexible funding between highway and transit projects. Additional data might also enhance RT's ability to compete for ISTEA flexible funds for transit projects.

2) RT could **better assess demand for transit**, particularly in unserved areas, by working with SACOG to obtain demographic, origin and destination, and GIS data.

3) RT could **consider formally documenting the procedures and performance criteria used to conduct system and route evaluations**. By publishing this information, RT could strengthen support for its plans and proposed new service.

4) RT could **consider conducting assessments of future service routes,** which would form the basis for developing short-range bus plans and capital improvement programs. Evaluation could quantify how many new transit passengers a candidate project would serve; how well the project would perform versus similar existing routes; and how many system connections and employment centers the project would serve. The analysis would also be useful if elements of the long-term LRT strategy cannot be fully implemented.

C. Transit Structure, Vehicle, and Equipment Planning

Replacement and rehabilitation programs are developed for vehicles, equipment, and facilities on an annual basis as an integral part of the operating and capital budget cycle. Current plans call for replacement of the bus fleet on a 12-year/500,000-mile cycle; however, this depends on the availability of adequate capital funding. In recent years, money for bus replacement has been scarce.

The average age of RT's bus fleet is 14.5 years. A new order of 95 40-foot coaches powered by CNG will decrease the average age to 8 years. In preparation for its alternative fuels program, RT conducted a study that assessed the differences between buses powered by CNG and methanol. RT concluded that CNG-powered buses would be 8% less costly to operate. Also, the study raised a number of environmental and safety concerns regarding the use of methanol.

RT has found its light rail vehicles to be very reliable. They will be replaced every 25 to 30 years depending on condition. This equates to approximately 1.5 million life-miles.

Even though capital financing has been scarce in recent years, Sacramento has maintained an extensive maintenance program for its equipment and facilities. This has extended the "standard" life-cycle substantially beyond what normally would be economically feasible. Life cycles are determined

based on FTA guidelines and modified as needed to meet Sacramento's operating conditions and availability of capital funding. In addition, RT has established preventative maintenance policies that cover both the bus and rail rolling stock, equipment, and facilities.

Internal reviews are conducted annually by department managers to determine whether or not existing facilities, rolling stock, and equipment meet RT's service, efficiency, and effectiveness objectives. District staff regularly reviews the status of its facilities and equipment as a part of ongoing management responsibilities.

D. Transit Management Analysis

According to RT, its unionized labor rates are among the highest in the country. Because of this, RT has been examining labor cost trends, focusing on contract provisions regarding wages, annual increases, fringe benefits, and absenteeism. A consultant has been hired to provide detailed information regarding trends and the provisions of labor contracts that have been negotiated by other transit authorities. The objective is to identify priorities and objectives for future negotiations with the labor unions, and to provide expanded information to the RT Board of Directors, which has supported labor in the past, on how to improve management of labor issues.

Every three years, management meets with non-contract employees to review and refine Personnel Rules and Procedures. RT does not offer formal training programs for all of its employees; some training programs are offered to bus and rail management personnel. A tuition reimbursement program is made available to all employees.

All service accidents involving revenue vehicles are reported to dispatchers and logged in the operating report. Drivers complete an incident report and supervisors complete a report of occurrence. Both of these reports are used by RT to classify and record the circumstance into a data base corresponding to ANSI/NSC standards.

Employee injuries are recorded based upon California Public Utility Commission and California Occupational Safety and Health Administration (Cal-OSHA) requirements as specified in the California Labor Code. Employees file an injury report and supervisors file an investigation report with a third party administrator. These accidents are then classified and recorded on a Cal-OSHA Form 200 log each month.

Department managers receive monthly copies of the employee injury logs for review and filing in their Department Safety Action Plan. Each department has authority to revise its plan as needed; however, each year the Safety Department analyzes the accident data and compares the results in the Department Safety Plan as a means of assuring ongoing improvement.

The District operates a Systems Safety Plan as defined and developed by American Public Transit Association (APTA). This plan incorporates the requirements of regulatory agencies and is modified under the direction of RT's Safety Review Board. Each year the safety plans are reviewed internally by the Safety Department and externally by one of three sources: insurance company audit teams, peer review teams, or APTA safety auditors. Recommendations are brought to the safety committee

and affected departments for review and final recommendations are presented to the safety review board for adoption.

Observations and Suggestions

1) RT is **commended for conducting thorough safety monitoring**, analysis, and planning.

E. Financial Planning

RT analyzes and reviews its financial position frequently throughout the year. In particular, RT performs a financial capacity analysis as part of the annual budget process and CIP development process. In addition, a financial capacity analysis is performed by RT, with SACOG as the certifying agency, as part of the submittal for the Regional TIP. The financial analysis examines the cost of current operations and projects future operating and capital requirements. These costs are then compared to the revenues available for the operating and capital programs.

Through 2010, the transit capital development program is estimated to cost $2.6 billion in 1991 dollars. Almost 85% of these costs are for light rail projects in seven different corridors. The cost estimates are based on typical "per-mile" costs of light rail construction in similar corridors. To keep development costs down, RT plans to use abandoned or inactive rail corridors, and to build much of the new service at grade. The projected costs will be in the $10 to $20 million per mile range instead of the $20 to $50 million per mile cost that other cities have experienced.

Throughout the review, RT made it clear that it does not have sufficient financial resources to pay for major system expansions and to implement its long-term plan. Currently, most of RT's operating costs are paid for with fare box receipts, federal operating assistance (FTA Section 9 funds), and sales tax from the TDA and Measure A. RT receives 1/6 of a cent from Measure A, which is a local sales tax that was approved by voters in 1988.

In addition to federal programs (Sections 3 and 9), RT utilizes state and local revenue sources to pay for capital improvements. California provides funds through the Transportation Capital Improvement Program. These funds are derived from the state's portion of sales tax on diesel fuel and an excise tax on gasoline sold in the state. Typically, RT receives about $2.5 million per year from this fund. In 1990, California voters passed propositions 116 and 108; funds from these state bond programs, which are anticipated to provide $250 million to RT through the year 2000, are programmed to fund 50% of the two rail-line extensions and 25% of the new South Corridor. Later in the decade, Proposition 111 (Flexible Congestion Relief) funds will be available. RT plans to use these funds to pay for rail expansion in the Downtown/Natomas corridor.

Local funding sources for capital improvements include Measure A and the Consolidated Roadway and Transit Development Fees (CDF). The TMP assumes that at least 50% of RT's Measure A funds will be used for capital projects, with the remainder for operations. The CDF, funded through Sacramento County, assesses transportation improvement fees on new developments and provides a little over $1 million per year, depending on level of development.

To support its long-range capital improvement program, RT has identified a number of new local revenue options: (1) a new half-cent sales tax; (2) the establishment of a benefits assessment district; and (3) a County Service Area levy. Voters will probably be asked to vote on the half-cent sales tax proposition in the 1994 election. RT expects it to generate about $55 million per year. The County Service Area levy is intended to pay for expanding paratransit services as required by the ADA. The Sacramento County Board of Supervisors has approved a framework for the program, but was not scheduled to vote on the amount of the levy until August 1993. RT anticipates that the levy will generate $4 to $5 million per year. Since RT's Board of Directors did not support creation of a Benefits Assessment District, it is no longer under consideration. Such a district would have assessed property owners near rail stations in proportion to the amount of benefit they receive in improved transportation access and mobility.

Observations and Suggestions

RT is commended for its thorough financial analysis and planning. Effective monitoring of current costs and resources, and future financial needs, will aid agency efforts to assess current service, promote measures to raise additional resources, and choose feasible service alternatives.

1) RT might develop an aggressive strategy to **pursue one or more of the local revenue options** identified as possible sources of support for the long-range capital improvement program. Given the projected funding shortfalls, the agency should be prepared to promote a variety of revenue-generating options.

F. Planning for the Americans with Disabilities Act

RT's ADA has been approved by FTA. Forty percent of the RT bus fleet is currently accessible, with approximately 130 daily boardings of disabled riders. With the arrival of new buses, RT expects the rate of accessibility to grow to 80% in 1995. During the off-peak, the system will be 100% accessible.

In addition, RT contracts with Paratransit, Inc. to provide paratransit services within its service area for those individuals unable to board standard vehicles. Paratransit, Inc. is a complete service organization that operates and maintains its own vehicles.

Observations and Suggestions

1) RT is commended **for increasing its number of accessible buses** and for supporting the County Service Area levy to fund programs that respond to ADA requirements.

G. Outreach Activities

Even though it has no formal policies for involving the public in its transit studies, RT regularly seeks citizen input in all major programs and planning activities. For example, during the alternatives analysis for the south corridor LRT alignment, RT scheduled a number of public meetings, which were publicized in the Sacramento Bee and other local newspapers. RT also maintains a list of neighborhood associations to which it sends notices to prior to public meetings. On occasion, notices

have been printed in four different foreign languages - Chinese, Spanish, Vietnamese, and Russian. Further public participation is encouraged during public hearings, which are held during RT's board meetings.

A citizens advisory committee has been formed by RT for the duration of the alternatives analysis. A permanent committee, known as the Disabled and Elderly Advisory Committee for Paratransit, is also sponsored by RT.

RT attempts to achieve representative participation by minorities and women in its formal citizen participation efforts. The membership of the RT Board of Directors includes two women, two African-American males, and five Caucasian males. Full consideration is given, during the development of transit plans and the provision of services, to securing disadvantaged business enterprise (DBE) participation. DBE participation on RT contracts is currently 23%.

H. Planning for a Drug-Free Workplace

RT has worked toward establishing a drug-free workplace. RT has negotiated reasonable drug testing programs which cover all employees, although it has not been able to conduct random drug testing because of resistance from its labor unions. RT provides educational training and rehabilitation services.

I. Capital and Operating Plans

Each year, RT prepares a Capital Improvement Program (CIP), which it submits to SACOG. The 1992 CIP, which covers a seven-year period, proposed over $920 million in transit improvements. Most of the improvements have been derived from RT's Short-Range Transit Plan, long-range Draft Transit Master Plan, and other regional transportation plans.

The CIP is prepared by RT's internal Capital Review Committee, which is responsible for developing selection criteria and a prioritized list of projects. For the latest CIP, project submittals were evaluated according to the extent they improved: (1) safety; (2) operational effectiveness, efficiency or reliability; (3) administrative effectiveness or efficiency; and (4) service quality or quantity. The list of prioritized projects is then forwarded to the Financial Development Department, which identifies potential funding sources for the higher ranked projects. As a result, there can be a realistic expectation that proposed projects will be funded.

VIII. ISTEA Planning

ISTEA defines a broad range of requirements and new initiatives related to metropolitan transportation planning. ISTEA also requires the U.S. Department of Transportation to certify the metropolitan planning process in transportation management areas (TMAs). Although regulations on ISTEA planning requirements were not finalized at the time of the Sacramento area review, Interim Guidance had been issued by FHWA and FTA.

One objective of the planning review was to assist SACOG, RT, Caltrans and other planning agencies in anticipating ISTEA changes, and preparing for future formal certification. The FHWA and FTA were also interested in problems encountered as ISTEA provisions were anticipated, and how these problems were resolved.

This section focuses on planning related to ISTEA, as observed at the time of the review, and summarizes relevant observations made in earlier sections of this report (indicated in parentheses).

A. General Observations

In many ways, SACOG and the region's planning agencies are in a strong position to meet ISTEA requirements. This is due to the passage of California legislation (particularly the California Blueprint for Transportation), prior to ISTEA, that embraced a similar philosophy and approach to transportation planning. State legislation establishes parameters and requirements for transportation planning and programming, and the development of strategies to manage congestion, implement transportation management/improvement programs, and improve air quality.

Despite the similarity in intent between federal and state legislation, sufficient differences exist that MPOs, such as SACOG, will have a difficult time coordinating activities necessary to meet ISTEA and state requirements. SACOG expends a significant amount of time attempting to satisfy both sets of requirements, and linking federal and state processes to create efficiencies in daily operations. Even so, the situation is so complex that only a few staff members understand completely what needs to be done and when to meet each set of requirements, and where the requirements overlap (IV.B.).

California legislation requires local boards to develop congestion management and air quality strategies. Any metropolitan area can have more than one board or district working to meet legislative requirements in accordance with locally derived sets of priorities. The state also requires RTPAs (which can consist of only one county) to prepare TIPs that incorporate projects identified by local CMAs. In contrast, the ISTEA focus is regional; it encourages local governments to participate within the MPO structure to develop strategies and programs based on regional priorities.

As it attempts to implement ISTEA, SACOG faces a number of issues or institutional conflicts due to parallel and pre-existing state requirements for transportation planning, and congestion and air quality mitigation. These issues are:

- **MPO Boundaries.** Section 134(c) of ISTEA requires that the MPO boundaries include the entire area designated as non-attainment for ozone and carbon monoxide. For the Sacramento region, this would include the eastern portion of Solano County, all of

Sacramento and Yolo counties, the southern portion of Sutter County and those parts of Placer and El Dorado counties not included in the Tahoe Regional Planning Area. To encompass this area, SACOG has invited jurisdictions in Placer and El Dorado counties that are not now members to join the SACOG joint Powers Agreement. In addition, SACOG has been working on a Memorandum of Understanding with the Metropolitan Transportation Commission, the adjacent MPO, which encompasses eastern Solano County.

The Placer County Transportation Commission, a state-designated RTPA, has maintained that ISTEA cannot extend SACOG planning jurisdiction to areas of Placer County without those jurisdictions' agreement. As part of their efforts to negotiate a memorandum of understanding, SACOG and Placer County Transportation Commission appealed to the Governor to resolve the metropolitan boundary issue. The issue was resolved in December 1993 with the state concluding that SACOG's planning boundaries, as the MPO, include the entire federal non-attainment area, and that SACOG may also act as the representative of the non-urbanized portions of Placer County in dealing with U.S. DOT.

- **Project Programming, Congestion Mitigation, and Air Quality Coordination.** State-mandated CMAs and air quality boards operate in the Sacramento region. Since they operate independently, their programs reflect local rather than regional priorities. The CMAs in the Sacramento region submit their projects to SACOG to be included in the state and federal TIP. ISTEA provides Congestion Mitigation and Air Quality (CMAQ) funds, and it requires the MPOs, in cooperation with state and local transit operators, to develop prioritized and financially constrained TIPs. The local and regional priorities do not always coincide. SACOG has developed a process to ensure development of regional priorities and a financially constrained TIP; revenue projections from different sources are made to guide choices and determine what projects the region can afford to undertake in four consecutive five-year increments (IV.B.).

B. Flexible Transfers of Funds

A major feature of ISTEA is the flexibility to transfer funds between highway, transit, and other program categories. The region's transit, congestion, and air quality planning may allow it to make extensive use of this funding feature. STP and CMAQ funds could be used to fund projects for further development of the light rail system, proposed by the CMAs or by RT. As previously stated, SACOG has developed a process for the TIP that will ease transfers of funds to finance a range of transportation projects. The process considers need, readiness, and eligibility, in addition to projections of available revenues. Further definition of the criteria, particularly need, is necessary to ensure that the priorities of the region's long-range plan are maintained (IV.B.).

SACOG has developed flexible STP guidelines, which allow projects that meet the travel demand needs identified during the planning process to be funded. The STP guidelines were developed through a committee structure which includes all modes and transportation interests in the SACOG region. The guidelines were reviewed by approximately 100 different agencies. At the time of the review, SACOG was developing criteria that would allow MPO participants to compare highway and

transit projects. Both STP guidelines and direct comparison criteria should be applied to planning as soon as possible.

C. Multi-Modal Integration

ISTEA identifies multi-modal integration as an important feature in the transportation system. SACOG and Caltrans are moving toward adopting ISTEA's multi-modal emphasis in long-range and corridor planning. This is evident in the options that have been included in the most recent RTP and the alternatives that are under consideration in the Beltway/I-80 study. The options incorporate TSM and TDM strategies as well as transit and highway improvements (V.C.).

At an institutional level, agencies representing all modes are involved in regional planning. There is increasing cooperation among these agencies to improve the region's travel demand modeling capability. The agencies should continue to assess a full range of multi-modal strategies. For example, estimates of pedestrian and bicycle travel are incorporated in the mode split model. RT might also incorporate TSM and TDM strategies into its planning, and coordinate them with options explored by SACOG and Caltrans.

D. Emphasis Areas

ISTEA identifies fifteen factors that must be considered as part of the planning process for all metropolitan areas. MPOs are expected to review their planning processes to assure that these factors are explicitly and substantially reflected in the planning process and its products. Several of these areas were discussed during the review.

Although compliance was not required until October 1, 1993, in August 1992, SACOG began reviewing its planning processes and making adjustments to include these factors. The review concluded that most areas are being adequately considered and little additional effort is needed, although the following four areas require substantial additional effort:

- **The preservation and efficient use of existing transportation facilities** is encouraged in the RTP's policy element, but few specific actions are included in the action element and related costs are not included in the financial element. RT does plan to preserve existing abandoned or unused rail corridors, which is consistent with ISTEA. For the 1993 RTP update, the cost of system preservation is being developed as well as programs and projects to enhance the efficient use of the system (IV.A.).

- The probable impact of transportation policy decisions on **land use and development** was dealt with briefly in the EIR for the 1992 RTP. To improve its technical capabilities in these areas, SACOG will be holding a major conference on travel demand modeling. Part of the conference will be dedicated to reviewing available land-use models that might be appropriate for the agency.

- Methods to enhance the **efficient movement of freight** are encouraged but not specified in the 1992 RTP. In 1994, SACOG formed a Freight Advisory Council, which is now in the process of identifying and categorizing freight industry problems so that specific programs and projects can be developed for inclusion in future RTPs.

- **Social impacts** were not adequately addressed in the EIR for the 1992 RTP. SACOG plans to incorporate an analysis of social impacts into the Supplemental EIR for the 1993 RTP.

E. Outreach Efforts

ISTEA directs MPOs to "provide citizens, affected public agencies, representatives of transportation agency employees, private providers of transportation, and other interested parties with a reasonable opportunity to comment" during the development of transportation plans and transportation improvement programs. Participants should be adequately informed, be given access to official information, and be allowed opportunities to influence plans and TIPs in the early stages of their development (V.E.).

Comments on the adequacy of involvement by a broad range of public agencies in area-wide planning are provided in section V.E.

Since the passage of ISTEA, SACOG has taken steps to enhance citizen participation in the planning process. Local concerns are represented through three Sub-PACs, which report to SACOG's Air Quality and Transportation Committee. SACOG has also formed a task force to address bikeway and pedestrian issues and an ad hoc environmental group. Even though public meetings are regularly held to present the RTP and TIP, SACOG is interested in improving its public relations effort so that it can better inform citizens and involve them in consideration of contentious transportation and air quality issues.

Although it holds meetings during alternatives analyses, RT did not appear to have a formal citizens' involvement program. RT could consider forming sub-committees (or advisory committees), which would provide citizens with more opportunities to influence policy development, consistent with the emphasis in ISTEA on public involvement (VII.G.).

APPENDIX 1

Participants in Sacramento Area Planning Review

U.S. Department of Transportation/Federal Transit Administration

Region 9:
Stewart Taylor, Regional Administrator
Walter Strakosch, Associate, Program Development
Jim Kenna, Director of Office of Program Oversight
Philoki Barros, Transportation Program Specialist

Headquarters:
Deborah Burns, Project Manager

U.S. Department of Transportation/Federal Highway Administration

Region 9:
David Swaim, Urban Transportation Planner

California Division Office:
Steve Guhin, Chief, Planning, Research & Environment

Headquarters:
Dean Smeins, Chief, Planning Operations Branch

U.S. Department of Transportation/Volpe National Transportation Systems Center (Volpe Center)

William Lyons, Volpe Center Project Manager
Robert Brodesky, Senior Technical Analyst
Frederick Salvucci, Massachusetts Institute of Technology, Consultant

Sacramento Area Council of Governments (SACOG)

Mike Hoffacker, Executive Director
Joanne Koegel, Director of Transportation & Air Quality Planning
Gordon Garry, Transportation Analysis Planning Manager
Bob Faseler, Manager Information Services
Ken Hough, Planning Director, Regional Transportation Plan
Carl Kuhn, Deputy Executive Director for Finance
Dave Young, Senior Planner
Gary Keill, Senior Planner

APPENDIX 1 (continued)

Sacramento Regional Transit District (RT)

Tom Matoff, General Manager
Pilka Robinson, Executive Assistant
Doug Wentworth, Director of Finance
Luther Freeman, Director of Planning and Marketing
Mike Wiley, Director of Administrative Services
Cam Beach, Chief Operating Officer
Joseph Costa, Senior Planner
Debra Jones, Senior Planner

Yolo County Transit

Terry Bassett, Transit Coordinator

Caltrans Sacramento Division

Brian Smith, Chief, Division of Transportation Planning
Jody Lonergan, Deputy District Director for Planning
Gregory Case
Jeff Pulverman
Donna Long

City of Sacramento

Gary Stonehouse, Planning Director

Sacramento Metropolitan Air Quality Management District

Les Ornelas, Chief of Planning
Ronald H. Maertz, Transportation Programs Manager

APPENDIX 2

Agenda for Urban Transportation Planning Review Meeting

February 9-11, 1993

Tuesday, February 9

9:00 - 9:30	Stewart Taylor FTA, Region 9	Welcome and introductory remarks
	David Swaim, FHWA, Region 9	
	Deborah Burns, FTA	Objectives for planning review
	Michael Hoffacker, SACOG	Introductory remarks
9:30 - 9:45	William Lyons, U.S. DOT, Volpe Center	Overview of meeting and schedule
		Format for all sessions - Discussion of urban transportation planning process
		Sessions begin with topic overview from regional agencies, build on written responses, with discussion led by review team members
		How the planning process works in the Sacramento Region
		Local Transportation Issues
9:45 - 10:15	Joanne Koegel, SACOG	Presentation
10:15 - 11:00	Walter Strakosch, FTA, Region 9 Fred Salvucci, MIT	Discussion
		Organization and management of the process -- Agencies' roles and responsibilities
11:00 - 11:45	Joanne Koegel, SACOG Jody Lonergan, Caltrans Gary Stonehouse, City of Sacramento Pilka Robinson, RT	Presentations
11:45 - 12:45	Dennis Scovill, FHWA, CA Division Robert Brodesky, Volpe Center	Discussion

APPENDIX 2 (continued)

Tuesday, February 9 (continued)

		Products of the process
1:45 - 2:30	Joanne Koegel, SACOG	Presentation
2:30 - 4:30	David Swaim, FHWA, Region 9 William Lyons, Volpe Center	Discussion

Wednesday, February 10

8:30 - 11:30		Ongoing transit planning
	Tom Matoff, RT Terry Bassett, Yolo County	Introductory remarks
	Walter Strakosch, FTA, Region 9 William Lyons, Volpe Center	Discussion
	Pilka Robinson, RT	Presentations
		Organizational issues - strategic planning
		Service development
		Structure, and equipment planning
		Transit management analysis
		Financial planning
		Americans with Disabilities Act
		Public outreach
		Capital/Operating Plans

APPENDIX 2 (continued)

Wednesday, February 10 (continued)		**How the planning process works in the Sacramento Region (continued)**
		Elements of 3-C process (multi-modal)
12:30 - 1:00	Joanne Koegel, SACOG	Presentation
1:00 - 2:30	Deborah Burns, FTA William Lyons, Volpe Center	Discussion
		Transportation planning techniques
2:30 - 3:00	Bob Faseler, SACOG Carl Kuhn, SACOG	Travel demand forecasting and costing methodologies
	Steve Guhin, FHWA, CA Division Robert Brodesky, Volpe Center	Discussion
		Approach to air quality (Clean Air Act)
3:30 - 4:00	Gordon Garry, SACOG Dave Young, SACOG Norm Cavell, Air District Mark Brucker, EPA	Presentations
4:00 - 4:45	Bob O'Loughlin, FHWA, Region 9 Fred Salvucci, MIT	Discussion
Thursday, February 11 ***at SACOG***		
		ISTEA Planning (VII)
9:00 - 9:30	Joanne Koegel, SACOG	Presentation
9:30 - 11:00	Dean Smeins, FHWA William Lyons, Volpe Center	Discussion Flexible funding Multi-modal integration Congestion Management System Project selection Other topics
12:30 - 2:00	Walter Strakosch, FTA, Region 9 David Swaim, FHWA, Region 9	Meeting summary -- Findings, follow-up actions, next steps

APPENDIX 3

Documentation Provided by Sacramento Regional Agencies

Sacramento Area Council of Governments

"Overall Work Program for Fiscal Year 1992/93," April 16, 1992

"Draft Overall Work Program for Fiscal Year 1993/94," February 18, 1993

"Sacramento Area Travel Demand Model," Brief Summary of Upgrades, January 25, 1993

"The 1991 Intermodal Surface Transportation Efficiency Act - Partnerships and Flexibility," June 26, 1992

"SACOG Budget July 1, 1992 - June 30, 1993," Submitted June 25, 1992

"Federal Regional Transportation Improvement Program for Fiscal Years 1992-93 Through 1998-99," Adopted November 19, 1992

"Suburban Mobility Project," Prepared for the Suburban Mobility Project, January 1992

"Mobility Action Plan - Arden Fair/Point West Activity Center," Prepared for Suburban Mobility Project, June 1992

"Mobility Action Plan - Sunrise/White Rock Activity Center," Prepared for Suburban Mobility Project, June 1992

"Current Efforts to Manage Suburban Traffic Congestion in the Sacramento Region," Working Paper #2, Prepared for Suburban Mobility Project, October 1991

"1992 Regional Transportation Plan," February 1992

"1992 Regional Transportation Plan, Technical Appendix," February 1992

"Household Travel Survey: Report #1," December 1992

"Organization and Management," December 1992

Draft Memorandum of Understanding Between Sacramento Metropolitan Air Quality Management District and Sacramento Area Council of Governments

Memorandum Describing Implementation Status of TCMs Contained in SACOG's 1982 Air Quality Plan and Complementary Projects Contained in the 1992/93 RTIP and 1992 RTP, from Michael Hoffacker to Federal Highway Administration, October 29, 1992

APPENDIX 3 (continued)

"Implementation Status of the 1982 Air Quality Plan," July 1992

"Ozone and Carbon Monoxide Air Pollution Emission Sources in the SACOG Region 1987-2010," November 1991

"Air Quality Plan," August 1982

Sacramento Regional Transit District

"Sacramento Regional Transit District Adopted Budget 1992-1993," August 24, 1992

"Transit Master Plan - Draft 20-Year Plan," April 1992

"Capital Improvement Program, Fiscal Year 1992/93 - Fiscal Year 1998/99," August 1992

"Sacramento Systems Planning Study, Task 4.3/4.5 - Travel Model Development," November 26, 1990
Summary Statistics for Fiscal Year 1992

"Moving Sacramento - Transit Makes It Happen"

"Financial Statements for the Year Ended June 30, 1992 and 1991 and Independent Auditors Report," Prepared by Deloitte & Touche, October 2, 1992

Sacramento Metropolitan Air Quality Management District

"Sacramento 1991 Air Quality Attainment Plan," Volume I, Plan Summary, July 24, 1991

"Sacramento 1991 Air Quality Attainment Plan," Volume II, Air Quality and Emission Inventory, July 24, 1991

"Sacramento 1991 Air Quality Attainment Plan," Volume III, Public Education Program, July 24, 1991

"Sacramento 1991 Air Quality Attainment Plan," Volume IV, Vehicles/Fuels Management Program, July 24, 1991

"Sacramento 1991 Air Quality Attainment Plan," Volume V, Transportation Control Measures Program, July 24, 1991

"Sacramento 1991 Air Quality Attainment Plan," Volume VI, Indirect Source Control Program, July 24, 1991

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